



Positive Behavior Support Program Throughout The Classroom: The Implementation of The Check-In/Check-Out Program *

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Abstract

The Check-in/Check-out (CICO), developed as a Tier 2 intervention program within the scope of positive behavior support in the literature, is suggested for the students with unsatisfactory peer relationships as well as low academic achievement and problem behaviors. The aim of this study is to evaluate the effectiveness of the CICO program on active participation to lesson behavior of the students who display problem behaviors and have low academic achievement in the classroom. In this study, the behavior of the students' effective participation to lessons was examined. Three 10-11 year-old secondary-school students participated in the study. Range-bound changing criterion design, which is one of the single subject experimental designs, was used throughout this study. The feedback gained from the teachers and the students indicated that the students improved in the behavior of effective participation to lessons. Social validity results are also consistent with the social relevance of the independent variable and the results of the study.

Keywords

Positive Behavior Support
Check-In/Check-Out
Problem Behavior
Effective Participation to Lessons
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Introduction

The increase on the number of children with problem behaviors has required the development and effective use of evidence-based programs (Horner et al., 2004). The Positive Behavior Support (PBS), one of evidence-based programs, was proven upon researches to be an effective approach in reducing and preventing problem behaviors in -educational settings (Fox, Dunlap, & Powell, 2002; Horner et al., 2004). PBS modifies the environment to help individuals achieve a quality of life and reduce problem behaviors. In order to improve students' behavior and teach them new ones, the principles of the applied behavior analysis (ABA) are utilized (Horner et al., 2004; Sailor, Stowe, Turnbull, & Kleinhammer-Tramill, 2007). PBS covers all the skills that enhance the social interaction and promotes success in work, social and family environments. It also involves the implementations that teach positive behaviors to the individual and strengthen and improve them as well as the system modifications that increase the possibility of the person's displaying positive behaviors (Lane, Parks, Kalberg, & Carter, 2007). The first and primary objective of PBS is to help the individual to improve

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his/her life quality along with changing his/her lifestyle. Its secondary objective, which is as important as the primary one, is to reduce or extinguish the individual's problem behaviors (Erbaş & Yucesoy Özkan, 2008).

PBS is a data based problem solving program in order to prevent the problem behavior, improve basic social skills, and determine disruptive behaviors (Horner et al., 2004). PBS builds a positive learning environment for the education of all children by providing personal, class-wide or school-wide interventions (Horner et al., 2004). This system, which is adopted in many schools such as pre-schools, –primary schools and high schools, supports the school administrators, teachers and other staff to build a safe, positive and adaptable environment for all students throughout the school (Sugai & Horner, 2002). SWPBS is an effective evidence-based implementation developed as an intervention model, and designed for the benefit of all children (Miller, Dufrene, Olmi, Tingstrom, & Filce, 2015; Ross & Sabey, 2014). It is a system approach that provides the necessary social, cultural and behavior support for social and academic achievement of children at school (Sailor et al., 2007).

The three-tiered PBS model with its core features is defined within the pyramid models. These three tiers involve various implementations for the needs of all children. The Tier 1 of PBS system is the universal or primary prevention tier. It focuses on building a positive environment, learning and reinforcing desired behaviors. All children have equal rights of education and development at school. The critical component of this system is that the requirements of all normally-developing children or children with special needs are determined and appropriate strategies are implemented for the success of all children in a general educational environment through necessary modifications. In the secondary tier, the teacher must have other alternatives to continue academic instruction when the problem behavior occurs. Moreover, in the secondary tier the success is greatly accomplished by the fact that students have the appropriate learning materials and program, that they have academic achievement, that there are students who will support the teacher and give suggestions whenever needed. If it is observed that the primary and secondary prevention tiers do not fulfill the needs of the child, then the tertiary tier must be considered. (Crone, Hawken, & Horner, 2010). Sugai and Horner (2002) pointed out that the tertiary tier was necessary if the problem behaviors were chronic, dangerous, disruptive preventing the learning and causing social and educational exclusion. The interventions in this level mostly involve more intensive programs that cover person-centered programs and that are prepared for an individual student based exactly on the functional behavior assessment (March & Horner, 2002; Sugai & Horner, 2002). Each support program in these three levels is vital for successful school implementations. Behaviors that do not suit to the written or unwritten rules at school or classroom and that reduce the effectiveness of the academic instruction process have a negative impact on the classroom setting (Çalık, 2009; Öztürk, 2008).

How to prevent and extinguish these disruptive behaviors and how to maintain the discipline at school and classroom has always been the primary issue for teachers and educators (Aksoy, 2000). Therefore, it is necessary to prepare behavior modification plans that utilize integrated behavior modification techniques in order to reduce the negative effects of problem behaviors (Chamorro-Premuzic & Furnham, 2008; Flook, Repetti, & Ullman, 2005; Lassen, Steele, & Sailor, 2006; Luiselli, Putnam, Handler, & Feinberg, 2005; Passolunghi, Mammarella, & Altoe, 2008; Phillipson & Phillipson, 2007).

The Check-in/Check-out Program (CICO), a second tertiary program which is offered within the scope of PBS in the literature, is an intervention program developed for helping students who display problem behaviors due to unsatisfactory peer relationships as well as low academic achievement (Hawken, MacLeod, & Rawlings, 2007; Lewis, Sugai, & Colvin, 1998). CICO (Crone et al., 2010; McCurdy, Kunsch, & Reibstein, 2007) was developed to provide the target support to the students acting a risk of developing serious or chronic behavior problems (Crone et al., 2010; Swoszowski, McDaniel, Jolivet, & Melius, 2013). Check-in/ Check-out is composed of a) check-in, (b) performance feedback cards, (c) classroom routines, (d) check-out, (e) home reports and reinforcer (reward) components. Check-in/Check-out is performed in three steps; the check-in stage when the students get the performance feedback cards once they arrive school, the feedback stage that students get feedback from the teachers about their behavior during the lesson and the check –out stage when the student bring their performance feedback cards and evaluating their scores. In CICO, the behaviors of students are observed by providing them with frequent feedbacks regarding their daily behaviors, and positive reinforcers are presented to students if they display desired behaviors. Students start the day and the lessons with a positive adult interaction and as a result, the effective adult-student interaction rate to support the positive behavior development increases and the initial conditions for desired behaviors are fulfilled. CICO is a school-wide intervention that all the employees are aware of the program and that provides behavior support for students with problem behaviors (Crone et al., 2010). The key feature of CICO is that each student is provided with the highest level of behavior support as much as possible. The reason is the idea to prevent the academic failure due to the problem behaviors of the students; therefore, to increase the academic participation (Fairbanks, Sugai, Guardino, & Lathrop, 2007; Lane, Capizzi, Fisher, & Enis, 2012). The studies in the literature show that Check-in/Check-out has an impact on reducing problem behaviors and improving academic behaviors (Fairbanks et al., 2007; Filter et al., 2007, Hawken & Horner, 2003; Hawken, O’Neill, & MacLeod, 2011; McCurdy et al., 2007; March & Horner, 2002; Todd, Kauffman, Meyer, & Horner, 2008). Consequently, these studies prove that the results of Check-in/Check-out are successful and that there is a functional relationship between Check-in/Check-out and problem behaviors. At the end of the intervention, since there was a decrease in problem behaviors, the academic achievement of some students increased. Fairbanks et al. (2007) state that secondary and tertiary level interventions best appear in PBS implementations but the interventions may still show effective results in classrooms and schools where PBS is not implemented. . No research testing the effect of any intervention program for the students in the risk group, who had not been diagnosed at the primary education level but showed intense problem behavior within the class, has been encountered at the end of literature review in Turkey. Applying programs effectiveness and efficiency of which is proven like Check-in / Check-out for children in the risk group; reduces the problem behaviors of the students as well as increasing the participation behavior. Thus, children with reduced problem behaviors and increased academic achievement continue to receive education with their peers in the least restrictive environment. In addition, it has been proven that in the classroom environments where problem behavior decreased, teachers have more time for teaching and this increased the productivity of the work done (Erbaş & Yucesoy-Ozkan, 2008; Hawken & Horner, 2003; Lassen et al., 2006). Hence, in this study, the impact of Check-in/Check-out, which was offered to the secondary-school students on the behavior of the active participation to lesson was analyzed in a school where PBS model was not adopted.

The purpose of this study is to present the effectiveness of CICO on the behaviors of the students' active participation-to-lesson who display problem behaviors and who have low academic achievement in a general educational environment. For this purpose, the following questions should be answered:

- 1) What is the extent of the impact of the Check-in/Check-out on the behavior of the effective participation to lessons for students with problem behaviors?
- 2) Is Check-in/Check-out effective on maintaining the behavior of effective participation to lessons for students with problem behaviors?
- 3) What are the social validity findings for Check-in/Check-out?

Method

Setting and Participants

This study was conducted with 10-11 year-old 3 students with low academic achievement who displayed problem behaviors in the classroom but were not identified as students with special needs.

The prerequisites for selecting the working group were that the participants had not participated in a program to prevent problem behaviors before; that he/she was not identified with any special needs; that the classroom teacher and/or family reported that the student displayed problem behaviors; that the problem behaviors negatively affected the academic achievement of the student; that the problem behaviors negatively affected his/her peers as well as classroom environment; that the student scored less than 82 points from Social Skills Rating System (SSRS); that the student scored limit value from Behavior Assessment Scale for Children and Adolescents aged 6 to 18 (BASCA). In order to select the participants of the study, some definite schools within Ankara province on the basis of accessibility and voluntariness were visited and school counselors and classroom teachers were interviewed using the teacher interview form developed with the consultancy of two scholars working in the special education department. The students nominated by their teachers were subjected to SSRS and BASCA. Moreover, in this study, "Who is It" measurement tool in MNE's official website consisting of 21 articles was used. Then, the frequencies of the answers given to the 2nd, 5th, 6th, 8th and 16th articles were calculated to select the participants through the forms. The anecdotal record form was used in order to determine if the student, who was identified as displaying problem behaviors based on the teacher interview as well as the scale results, really had disruptive behaviors, and to identify the problem behaviors of the students, and to determine their function. After the students were determined, the students, their families and teachers were asked if they would be willing to participate the study and the ones volunteering were interviewed. Four students were determined among the voluntary students and one of them was selected as a substitute in case of any loss of the participant. This voluntary participation still requires family consent.

The first participant is an 11-year-old, fifth grade female student with low academic achievement who was not identified with any special need, who is reported by her teachers to have problems with arriving the class late, walking around the classroom when the teacher is not there, frequently arguing with her friends, not doing her homework, not participating lessons, and not preferred by her friends in group games. The first participant, who was directed to the counseling service for at least three times due to her problem behaviors, scored limit value from BASCA and scored 60 points from SSRS. The student was nominated for the 4th(have the habit of arguing with his/her friends)5th(speaking and disrupting her friends most) 15th(not taken into consideration by her classmates) and questions by her friends in the sociometric scaling.

The second participant, who receives a treatment for attention deficit disorder, is a 10-year-old fifth grade male student with a low academic achievement, often absent from school, argues with his friends during breaks especially when the teacher is not present in the classroom, has difficulty in participating to lessons, and has been directed to the counseling service for at least three times. This participant scored the limit value from BASCA, and scored 64 points from SSRS. The student was nominated for the 4th(have the habit of arguing with his/her friends), 5th (speaking and disrupting her friends most),, and 17st(have difficulty in controlling her acts) and 21st (not obeying the classroom rules) questions by his friends in the sociometric scaling.

The third participant is an 11-year-old fifth grade male student with a low academic achievement who was not identified with any special need and is often absent from school and does not actively participate to lessons, and uses his friends' items without their permission and damages them during lessons, and has been directed to the counseling service for at least three times. He scored the limit value from BASCA, and scored 60 points from SSRS. The third participant was nominated for the 4th(have the habit of arguing with her friends), 5th (speaking and disrupting her friends most), 17st(have difficulty in controlling her acts) and 21st (not obeying the classroom rules) questions by his friends in the sociometric scaling.

The teachers of the four participants cooperated with the researcher throughout this study. Within this context, Science, Social Sciences, Turkish and English courses as well as their teachers were taken into the scope of this study.

The Dependent and Independent Variable

The independent variable of the study is Check-In/Check-Out program (McCurdy et al., 2007). Check-in/Check-out, which is also known as Behavior Education Program, was developed to provide the necessary support for the students showing a risk of developing serious or chronic behavior problems (Crone et al., 2010). Check-in/Check-out is a prevention program where the target students are provided with frequent feedbacks regarding their daily behaviors, and positive reinforcers are presented to the students if they display desired behaviors. Students start the day and the lessons with a positive adult interaction and end the day with a positive interaction again by receiving feedbacks regarding their behaviors on that day (Fairbanks et al., 2007).

The dependent variable of the study is participating to lessons (30 minutes). Listening to the teacher by looking at the textbook or at the teacher's face during the instruction, noting down the text or problem on the board to his/her notebook during the period of the time specified by the teacher, and answering the questions of the teacher during the instruction is defined as active participation to the lesson.

Experimental Design

Range-bound changing criterion design was used in this study. Range-bound changing criterion design is a variant of changing-criterion. While determining just one criteria for changing-criterion, lower and upper limits are determined as criteria for range-bound changing criterion design. The former indicates the lower level for the target behavior and the latter indicates the maximum level. This gap increases experimental control. The improvement in the behavior occurs when the target behavior complies with the pre-determined criterion as well as the indicators of experimental control. Once target behavior does not comply with the pre-determined criterion, experimental control needs to be repeated. As for the Range-bound changing criterion design, it is possible to go back to previous step since the tiers are determined (McDougall, 2005). While determining the targets, it is provided to make decisions daily depending on the participant's performance. Setting the lower and the upper limits in order to control the participant and provides his/her continuity via flexibility. Thus, when the target has upper and lower limits, it provides a strong experimental control on the target behavior.

As in all single-subject designs, the data paths that appear upon the merging of data obtained from the graphs are interpreted as trend and level. In range-bound changing criterion design, the curves that appear during the intervention period with baseline in the graphs are compared to the data in the

previous range in terms of trend and level, and the effectiveness of the intervention is determined. In the graphs, if the same data are obtained without any change compared to the baseline level, this shows that the intervention is not effective. When the intervention is implemented, if the change is not within the target range although there is a change on the behaviors, this shows that no suitable target was set (Gast & Spriggs, 2010).

Baseline

During the test period of the study, baseline data were collected for three sequential days for each participant to determine the behavior of the students' effective participation to lessons. A camera was installed to observe the participants in their natural classroom environment, collect baseline data, and record the entire implementation. The camera was installed in the classroom one week before collecting the baseline data to minimize the effect of the camera on the students. Furthermore, some precautions were taken in order to prevent any failure on the recording process by selecting a different student in the classroom every day. The program was explained to the families by arranging a meeting with the parents of the students in the classroom and their written permission was taken for the recording process at the meeting held with the families.

The baseline data were collected in four academic lessons (Science, Social Sciences, English and Turkish). Then, data count was conducted for each behavior through the records.

Implementation of the Check-In/Check-Out

Step One involves the training of the classroom teachers, coordinating teachers, families and students regarding the program. The content of this training for the classroom teacher involves scoring the daily targetcards and offering reinforcers; providing targetand scoring the cards and as for the family, it involves the program content, how to evaluate the daily feedback cards and offering reinforcers. *Step Two* involves the 30-minute training before starting the program targeted for the participants. These trainings consist of: (a) check-in, (b) performance targetcards, (c) classroom routines, (d) check-out, (e) home reports and reinforcer (reward) components. Before proceeding with the basic level of Check-in/Check-out, the class-wide adaptations were organized and the preparation phase is completed.

The content of the program as well as the reason why there was a camera in the classroom during the program and what it does were explained to the students in detail.

Teacher Training: Teachers having classes till noon (Science, Social Sciences, English and Turkish) are provided with a 30 minute-three session teacher trainings for five days a week at the school counseling service. During the first session, Check-in/Check-out was introduced, in the second session it became a model for the evaluation of the feedback cards and rewarding the students. In the third session, consistency study for the evaluation of the target cards was done. The implementation started once 80% procedural integrity for the evaluation of the target cards was maintained among the teachers.

Family Training: The families of the participants were provided with 45-minute training by scheduling a joint meeting in the counseling service. During this training, the families were informed via sample presentations about the program content, target behaviors, daily target cards and how they are scored, how to monitor and sign the daily target cards, and how to interact with the participant through the cards.

Student Training: The students were individually informed in 30-minute sessions in the counselor's room about how the program would be conducted, when the cards would be scored, what these scores meant, when they could get their rewards, and how to return the signed cards. In addition, the favorite reinforcers of the participants were determined by using reinforcement forms during the training process.

Determining the Criterion in the Study: In the study, the criteria were determined by organizing a meeting with the teachers within the scope of the study. In this meeting, the personal characteristics of the students were taken into consideration with the teachers and it was decided to specify a different criterion level for each student. However, as the students had not been included in any program like CICO that involved planning and monitoring, and due to the inconsistent views among the teachers, the participants were not provided with criteria during the first week, and the following week's target range was determined by setting the lower and upper limits over the average value of the participants' performance for the first week. The target range of the first participant was determined as +/-15% plus of the average of 5 days of the first week, and the target range of the second and third participants was determined as +/-10% plus of the weekly performance average. This criterion was taken into consideration when setting a goal by the end of the intervention.

After all these trainings were completed, CICO implementation was conducted in three stages. The *First stage* is the check-in stage where the students get their daily feedback cards when they arrive at school in the morning, the *Second stage* is the feedback stage where they get feedback from their teachers at the end of the lesson regarding their behaviors during the lesson, and the *Third stage* is the check-out stage consisting of returning the behavior cards at the end of the lesson, scoring and providing feedback. Training sessions to cover all these three stages were held till noon for five days a week. Training sessions lasted for 6 weeks in total for each student.

Evaluating the Daily Feedback Cards

Daily target cards were used so that the participants could monitor their daily behaviors and for the purpose of scoring. These target cards (15-20 cm) consist of the sections where the target behaviors of each participant are written and where these target behaviors are scored. Moreover, on the daily target cards, there is a part where the daily point of the participant is written, a part where the date and the reward are written, and another part where the parent can put his/her signature and write a note. Daily target cards were prepared so as to cover all the lessons by noon. Daily target cards were scored individually interviewing each student with the teacher at the end of each lesson. At the end of the fourth lesson, the student visited the coordinator and handed the daily target card (check-out). The scoring and rewarding processes were conducted by the coordinator. The independent variable continued to be implemented for 6 weeks.

Data Coding in the Study

During the CICO implementation, learning sessions were divided into weekly phases. During the first week, no target was set for all the three participants, and the average of each behavior was taken at the weekend by following the behavior of the students' effective listening to the lesson for five days through the recordings. The following weekly target of each participant was calculated based on this criterion. In the study, to measure the behavior of the students' effective participation to the lesson, the Social Sciences, Science and Turkish were considered. Then the recordings of these lessons were watched, and their behavior levels were identified by using the whole time.

By effective participation to the lesson it is meant that the student listens to the teacher by looking at the textbook or at the teacher's face during the lesson, notes down the text or problem on the board to his/her notebook during the period of time specified by the teacher, and answers the questions of the teacher during the lesson. This variable was assessed by watching the entire 30-minute recordings by deducting 5 minutes each from the starting and ending times of the lessons. The total period of the four lessons was calculated as 120 minutes, and the students' behaviors were cumulatively recorded as the total time on the record form. During the maintenance phase, two weeks after the end of Check-in/Check-out, the maintenance data of the students during the lessons evaluated for five days were collected by recording process as in the assessment of the baseline data and intervention data.

Collecting the Social Validity Data

The data were collected from the teachers and students in two steps to consider the effectiveness of the Check-in/Check-out on the academic and social skills of the students as social validity.

In the first step, the data were collected from the teachers, students and their families by using the Check-in/Check-out Social Validity Forms (Crone et al., 2010). *In the Second step*, the participating teachers and students were asked about their views on Check-in/Check-out, its use and efficiency via the semi-structured interviews. Within the scope of the study, after the interview questions were prepared by the researcher, they were evaluated in terms of content validity. The interviews were individually conducted in the counseling service, and lasted for 30-45 minutes. The interviews were recorded via a tape recorder in order to make an analysis later, and the content was analyzed and interpreted.

Data Analysis

In the study, the graphic data were visually analyzed by using the range-bound changing criterion design, one of the single-subject designs. Furthermore, the weekly session data of the students were separately shown in column charts (Figure 1).

In Check-in/Check-out, the behavior of the students' active participation-to-lesson were shown individually on the chart on daily basis as the baseline phase, intervention phase and maintenance phase of each participant. The social validity data were discussed by analyzing the content of the semi-structured interviews conducted with the teachers and students.

Procedural Integrity

In this study, procedural integrity was collected to determine whether the Check-in/Check-out intervention sessions were properly conducted by the researcher. A procedural integrity form was developed within the scope of the study for the purpose of evaluating the procedural integrity data. The videos of the intervention sessions were directed to the supervisor, and the supervisor was asked to watch these recordings for each experimental condition, and to tick the 'not appropriate', 'no and yes' columns in the checklist regarding the training program implementation steps that the researcher fulfilled or could not fulfill. Procedural integrity data was calculated based on the procedural integrity form by attending the intervention individually in all sessions during the first week and third week. 30% of the 4th, 5th, 6th, 7th and 8th week sessions were held through the session recordings by selecting via an unbiased assignment. After the forms of the supervisor were filled in, the procedural integrity of the study was calculated as 98% by using the observed researcher behavior / planned researcher behavior x 100 formula based on the data.

Calculating the Inter-Observer Reliability

In this study, the data for 384 sessions were collected (128 for each participant). 30% of the data for the sessions were selected via random assignment, and coded by a second supervisor who has been studying his/her doctorate in Special Education Department. In this study, the researcher, together with the second supervisor, coded by monitoring the data determined via random assignment. Moreover, the researcher answered the questions of the second supervisor about the coding, and clearly explained the coding criteria. Then, the researcher monitored the second supervisor while coding a data determined via random assignment. When the supervisor was able to code independently, the second supervisor coded 30% of the data.

The inter-observer reliability was calculated as approximately 96% for the first participant, approximately 98% for the second participant, and approximately 97% for the third participant. The inter-observer reliability of all the data, 30% of which were determined via random assignment, was calculated as approximately 97%.

Results

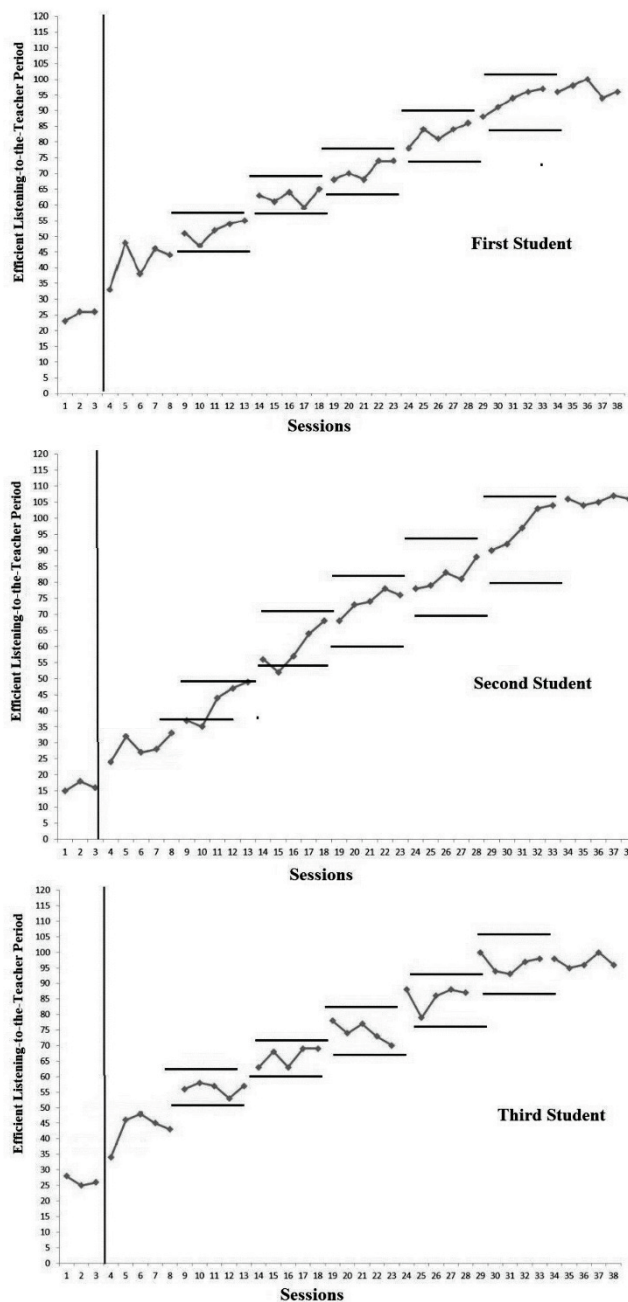


Figure 1. Experimental Data Results Regarding the Effect of Check-In/Check-Out on the Behavior of the Students' Effective Listening to the Lesson

First Participant: During the baseline sessions the behavior of the students' effective participation to the lesson in the classroom varied between 15 and 18 minutes, and that the participant displayed the behavior of effective listening to the lesson for approximately 17 minutes. It was observed that the student displayed the behavior of effective listening to the lesson for approximately 33 minutes during the first week.

In the meeting held with the teachers considering the first week's data, after the obvious progress of the student, it was decided to set the second week's target range as between 36 and 49 minutes (+/-15%) for the participant over the performance average of the participant for five days a week.

It was observed that the target range specified for the first participant increased during the second week. In the meeting held with the teachers, it was decided to keep the following weeks' target increase within $\pm 15\%$ plus of the weekly performance average of the participant. Based on these data, the target range of the third week was set as between 51 and 68 minutes.

It was observed that the first participant displayed the behavior of effective participation to the lesson for approximately 59 minutes during the third week. The fourth week's target range for the participant was set as between 63 and 85 minutes ($\pm 15\%$ plus of the average value). It was determined that the participant's effective listening-to-the-teacher behavior during the fourth week was approximately 74 minutes. The target range of the following week was set as between 70 and 94 minutes. It was observed that the participant achieved the goal by displaying the behavior of effective participation to the lesson for approximately 82 minutes during the fifth week. The first participant displayed the behavior of effective participation to the lesson for approximately 97 minutes during the sixth week.

Check-in/Check-out implementation was completed at the end of the sixth week, and the maintenance data were collected for five days after two weeks. Looking at the monitoring data, it is observed that the student maintained the behavior of effective listening to the lesson. The maintenance data values vary between 106 and 107 minutes.

Second Participant: During baseline the behavior of effective participation to the lesson varied between 23 and 26 minutes (25 minutes in average). It was observed that the second participant displayed the behavior of effective participation to the lesson for approximately 41 minutes during the first week. It was decided to set as between 47 and 57 minutes ($\pm 10\%$ plus) over the performance average that the participant displayed for five days a week. It was observed that the participant displayed the behavior of effective participation to the lesson for approximately 52 minutes during the second week. It was decided to keep the weekly performance average of the student within $\pm 10\%$ range. Based on these data, the target range of the third week was set as between 57 and 69 minutes. It was observed that the participant displayed behavior of effective participation to the lesson for approximately 62 minutes during the third week. The fourth week's target range for this participant was set as between 64 and 78 minutes ($\pm 10\%$ plus of the average value as 62 minutes).

It was observed that the target range (64-78 minutes) specified for the participant increased during the fourth week. The target range of the following week was set as between 65 and 78 minutes as $\pm 10\%$ plus of 71 minutes. The participant kept improving within the target range (74-91 minutes) and displayed the behavior of effective participation to the lesson for approximately 83 minutes during the fifth week. It was observed that the participant displayed the behavior of effective participation to the lesson for approximately 93 minutes during the sixth week. This equals to 81% of total listening period (120 minutes).

CICO implementation was completed at the end of the sixth week, and the maintenance data were collected for five days after two weeks. Looking at the maintenance data, it is observed that the participant maintained effective participation to the lesson.

Third Participant: It was determined that the third participant's listening-to-the-teacher behavior during baseline was approximately 26 minutes. Considering the first week's average of the student (43 minutes), it was decided to set the second week's target range as between 51 and 62 minutes ($\pm 10\%$ plus).

It was observed that the target range (51-62 minutes) specified for the participant increased during the second week. In the meeting held with the teachers, it was decided to keep the following weeks' target increase within $\pm 10\%$ plus of the weekly performance average of the student. Based on these data, the target range of the third week was set between 60 and 73 minutes. The fourth week's target range for the participant was set between 67 and 82 minutes ($\pm 10\%$ plus of the average value as 66 minutes). It was determined that the third participant's behavior of effective participation to the lesson during the fourth week was approximately 74 minutes.

It was observed that the participant achieved effective participation to the lesson for approximately 86 minutes during the fifth week. The participant reached the goal by increasing the target range (77-94 minutes) during the fifth week. It was observed that the behavior of the students' effective participation to the lesson during the sixth week was approximately 96 minutes. This equals to 80% of total listening period (120 minutes).

Check-in/Check-out was completed at the end of the sixth week, and the maintenance data were collected for five days after two weeks. Looking at the maintenance data, it is observed that the students maintained the behavior of effective listening to the lesson.

When the qualitative data obtained from teachers and students and the quantitative data collected within the scope of the research are examined, it is seen that there is a high increase of the behavior of effective participation to lesson among students compared to the starting level after the program. As a result, when the behavior of three students' effective participation to lesson is compared to the starting level data, it is seen that the applied intervention is efficient and this efficiency is continuing according to monitoring data.

As a result of the interviews with the teachers and the social validity findings for check-in / check-out, all of the teachers stated that students were not prepared to learn the lesson, they did not want to listen to the lesson, they were very bored and therefore they were dealing with friends or other objects before the behavior program applied. And the students stated that they got bored in terms of participation to lesson during the class, they wanted to deal with other objects, they got used to failure most of the time and therefore they accepted failure. After the intervention program, all of the teachers stated that there was a positive increase of the students' behavior of effective participation to lesson and the students listened to the lesson carefully and asked questions about the lesson.

In the interviews conducted with the students after the check-in / check-out, the students stated that they found the lessons more enjoyable about their effective participation and showed effort to listening. When the qualitative data collected from the teachers and students and the quantitative data collected within the scope of the research are examined, it is seen that there is a high increase in the effective listening to teacher behavior of the students compared to the starting level after the program.

Discussion

The results of the study showed that the behavior of the students' effective participation to the lesson increased. The data obtained from the interviews conducted with the teachers and participants and the quantitative data obtained from these interviews support each other. Furthermore, in order to review the program within the scope of social validity, the teachers and students reported their views in favor of the effectiveness and efficiency of the program.

When the results of the study were examined, it was noticed that each participant displayed the behavior of effective participation to the lesson for approximately 23 minutes before Check-in/Check-out. It is observed that this average is quite low compared to the total period of the lessons within the study. Throughout the interviews, all the teachers reported that the students did not come to the school to learn the lessons willingly and not want to listen to the teacher, and they were really bored and distracted by their friends or other subjects. The students stated that they got bored during the lessons and prefer to show interest in other subjects and got often used to academic failure.

The qualitative data collected from the teachers and students as well as the quantitative data collected within the scope of the study show that the behavior of the students' effective participation to the lesson increased obviously after the program compared to the baseline level. These results support the existing study results on the effectiveness of Check-in/Check-out in the literature (Hawken & Horner, 2003; Hawken et al., 2007; Kauffman, 2008). The studies show that the results of Check-in/Check-out are successful, and that there is a functional relationship between Check-in/Check-out and

the problem behaviors (Campbell & Anderson, 2008; Fairbanks et al., 2007; Hawken et al., 2011; Hawken & Horner, 2003; Lane et al., 2012; March & Horner, 2002; Mong, Johnson, & Mong., 2011; McDaniel, Bruhn and Mitchell, 2015; Miller et al., 2015; Katherine, Hunter, Jeffrey, Chenier, & Gresham, 2014; Ross & Sabey, 2014; Todd et al., 2008). However, this study differs from the study results in the literature in that the Check-in/Check-out was conducted in a school where the PBS model was not implemented before. The study was conducted in the second semester of the academic year as the planning took a long time and the study period was only six weeks. The short duration of the implementation period reveals that the increase on the effective participation to the lesson behaviors is not reflected on the academic achievement as there is not any learning package within the program that will enable academic learning. This was also supported with the views of the teachers and students. While the students stated that the program did not affect their scores noticeably, the teachers suggested that the program had to be implemented from the beginning of the semester. This case shows that academic achievement is a continuum and can be realized when the core features of this process are systematically implemented and the cooperation between the school and the family is more effective.

In the light of the observations and interviews, it was observed that the most frequently displayed problem behaviors of the three participants were arguing with their friends during the lesson, being distracted by a material that is not among the course materials, talking about something out of the course subjects, and walking around the classroom. Following the program, it was observed that the behavior of the students' effective listening to the lesson increased and the problem behaviors that the students displayed in the classroom decreased. Enabling the students to participate in the lesson actively is an important strategy for preventing undesirable behaviors. Sezgin and Duran (2010) pointed out that building a student-centered, positive and warm classroom atmosphere that enabled the students actively join the lesson helped to reduce undesirable behaviors.

However, improving the academic achievement was not set as a target for the behavior of effective listening to the lesson. Due to the timing of the program and the content focusing on problem behaviors, in other words, as no instruction package was implemented for the purpose of improving academic achievement, there was not any measurable improvement in academic achievement. However, in addition to this, while the students expressed that they adopted much more positive attitude towards the lesson and that they began to like the course, the teachers stated that the students started to learn the instruction as they displayed better behavior of active participation-to-lesson, that they wanted to answer the questions during the lesson and that they often answered them correctly. Check-in/Check-out, which is a secondary tier prevention program in the literature, has been developed to help the students who display problem behaviors due to unsatisfactory peer relationships as well as low academic achievement (Hawken et al., 2007). Check-in/Check-out, one of the common interventions of the secondary tier, is a school-wide and classroom-wide intervention that all the employees are aware of the situation and which every potential student can benefit from. Within the scope of the study, Check-in/Check-out, which is a secondary-tier intervention, was presented to the target students on classroom basis at a school where SWPBS model was not implemented.

Considering all the studies conducted to date, research emphasize that PBS interventions are generally divided into school-wide, classroom-wide and on individual basis. While SWPBS focuses on a preventive program that encourages positive behaviors by taking the school into consideration, Classroom Wide Positive Behavioral Support (CWPBS) focuses on the interventions that target the individual and classroom problems of students (Ünlü et al., 2013). Fairbanks et al. (2007) stated that secondary and tertiary level practices could be effective at schools where the SWPBS model was not implemented. It is evident from the study results that Check-in/Check-out, one of the secondary-tier intervention programs, was implemented in a school where no SWPBS model was implemented and that it significantly improved the behavior of the students' active participation to lesson who display disruptive behaviors. The study results support the existing studies in the literature.

CWPBS is a cost-effective and equitable prevention program as it covers all the target students and focuses on the target students as well as their needs; CWPBS contributes to learning much more as it assists the students in their natural environment within the classroom. Moreover, as CWPBS helps the students in their natural environment, its generalization is considered high and can serve to permanence (Crone et al., 2010; Lane, Kalberg & Menzies, 2009). Considering the maintenance data of the study, it shows that the students maintained their acquired behaviors in the same level. Besides, the views of the interviewed teachers on the effectiveness and efficiency support the position that the researchers suggest.

This study has some limitations. Range-bound changing criterion design, one of the single-subject experimental designs, was used in the study. The generalizability of the study results can be increased with full experimental designs with test groups and control groups. In the study, 3 fifth-grade students who engaged in similar disruptive behaviors were used. In order to increase the external validity of the study, the participants can be selected from different grades. Another limitation of the study is that the generalization data of Check-in/Check-out cannot be collected. In addition, as the study was conducted during the second semester of the academic year, the maintenance data could be collected after two weeks. With a better planning, the range can be extended based on the maintenance data after the intervention is completed. The participants, who were not taught any social skills, with performance problems took part in this study. Check-in/Check-out can be implemented by teaching skills for the students who display social skill problems.

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