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Token Economies and Implementation in General Education Classrooms

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by

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Abstract

Previous studies have shown the positive effects token economies can have on student behavior. The current project examined the implementation and effects on student behavior of creating a tier two behavior intervention system based on student preferences for reinforcers and using token economies in a general education first grade classroom. Based on the Assessment portion of the project, five students would benefit from a token economy behavior intervention system. The author collaborated with general education school personnel to design and implement a token economy for each of the students. Using the token economy with preferred reinforcers positively impacted four of the five students' behaviors.

Token Economies and Implementation in General Education Classrooms

A token economy is a procedure used to decrease inappropriate behavior and increase desired behavior that involves delivering tangible reinforcers contingent on specific appropriate behavior(s). For example, a student may carry a chart made of paper with tokens (i.e. little pictures) applied to the chart as reinforcement for expected behavior. After earning all of the tokens, the student would receive a reward. Depending on the student's preferences, the reward may be a tangible, an edible, or something else the student finds reinforcing. Token economies may be used in different ways. For example, a student may earn a stamp or a check mark on a paper and receive the reinforcer after earning the previously determined number of checks Higgins et al. (2001). A teacher adding pebbles to a jar when a class demonstrates expected behavior is an example of using a token economy with a group of students. When the students fill the jar, the whole class gets a previously determined reward. Token Economies can be used in both general education classrooms (i.e., a class taught by a general education teacher that includes all students) and special education classrooms (i.e., a classroom where students receive

additional support related to the goals defined on their Individualized Education Programs [IEPs]).

Smith et al. (2022) reviewed a variety of articles that showed token economies can help increase student engagement, increase desired behavior, and help decrease problem behavior. Although research on the positive impact of token economies on student behavior has been conducted, some teachers are still hesitant to implement. Researching the benefits of token economies will allow me to help general education teachers recognize the feasibility and benefits of implementing token economies in their classrooms.

I was interested in this topic because I see a wide variety of behavior systems put in place at the school where I work. The general education teachers did not think a token economy would work in their classes effectively and they would require too much time. I wanted to see if token economies could benefit general education students, and if they could be implemented effectively. In this paper, I review literature that shows the positive impacts of token economies on student behavior and report the results of assessing my students and implementing token economies as a tier-two behavioral intervention. For the assessment report I conducted observational assessments, an antecedent behavior consequence (ABC) assessment, gathered data on students' current academic performance, and interviewed the teacher. I chose to do all these assessments so that I could get a clearer understanding of what might be the function of each student's behavior, how often the off-task behavior occurred, and what reinforcers might impact the students' behaviors. The intervention report describes how the implementation of a token economy with a student's preferred reinforcers impacts their off-task behavior and my reflections on the project.

Method Used to Conduct Literature Review

To conduct my literature review, I searched Academic Search Ultimate on EBSCO Host for articles that reported the results of studies of token economies in elementary school general education classrooms. In my literature search, I used the search terms “token economy or token system or token reinforcement or reward,” “general education classroom,” and “single case design or single subject design or single case research design.” I limited my search to articles that were peer-reviewed and included the full text. The search resulted in 12 articles. I excluded nine articles that did not report effects of implementing token economies on student behavior in elementary school general education classrooms or did not use a single case design. The three remaining articles directly relate to the effect token economies have on student behavior in elementary general education classrooms.

Literature Review

Token Economy Implementation where the Number of Tokens Earned Impacts Reward

Higgins et al. (2001) studied a token economy to decrease a student's problem behavior in a third-grade inclusive classroom using a multiple baseline design across behaviors. The participant’s inappropriate behavior included out of seat behaviors, talk-outs, and poor posture. The observer used momentary time sampling for a 20 min period, and data was taken at the end of each minute. The student could earn three check marks every minute, one for each behavior that was not observed. At the end of the observation period the researcher divided the total number of check marks in half to determine the number of minutes of preferred activity the student earned (up to 10 min). The researchers found that all three behaviors drastically decreased after implementing the token economy and the levels of behaviors remained consistent

or continued to decrease during the maintenance phase. The authors concluded that the token economy used in this study would be feasible for teachers to implement in similar classrooms.

Token Economy using Preferred Tokens

Carnett et al. (2014) built on the work of Higgins et al. (2001) by researching the effects of different types of tokens on the behaviors of a 7-year-old boy with Autism using an alternating treatments design in both general education and special education classrooms. Baseline was collected on the student's inappropriate behavior (i.e., screaming, falling, and laying on floor), and two different token charts were implemented in alternating phases. One token economy used the student's perseverative interest (jigsaw puzzle pieces) as the token and the other used pennies with Velcro on the back that could attach to a Velcro board. The student earned tokens for every 20 s of on-task behavior. On-task behavior was defined as sitting with buttocks on the ground, head oriented toward the teacher, and having an absence of challenging behavior. Inappropriate behavior data was taken using 10 s partial interval recording and on-task behavior used 10 s whole interval recording. The researchers found that both token charts positively impacted the student's behavior, but the chart based on the perseverative interest had a more positive impact; time on task increased and problem behaviors decreased. The authors noted that the token chart based on the perseverative interest might be more reinforcing than the reinforcer and returning the chart to the adult may cause other undesired behaviors. Carnett et al. (2014) concluded this variation of token economy would be easy for teachers to implement.

Token Economy using Peer Implementation

Christensen et al. (2004) looked beyond the effects of token economies and using preferred tokens and studied implementing token economies informed by a functional behavior assessment (FBA) using a peer. Two third grade male students identified as being at-risk for

emotional behavior disorders and academic failure participated in the study, and two peers were assigned to each of the focus students from their class. The two class peers and two focus students were taught how to implement the token system so they could both monitor. The focus students could earn a point for every 10 s whole interval they used socially appropriate behavior. The peers wore MotivAiders that would vibrate when the interval was done. The peers then signaled the focus students when it was time to add a token and asked the focus students to self-reflect on their behavior. The peers and focus students would then both rate the focus student's behavior. The intervals increased to 2 min, then eventually 15 min. Along with the token economy, the classroom teacher and behavior specialist taught the focus students appropriate social skills. The researchers found that both focus students' on-task behavior increased and problem behavior decreased, and the token economy was socially acceptable to all four students involved and the teacher. The study also showed that third grader students were able to successfully self-monitor and monitor their peers.

Summary of Articles

Carnett et al. (2014) show that using tokens that the student prefers can have a positive impact on the student's behavior. Higgins et al. (2001) show a token economy system where the number of tokens the student receives impacts their choice of reward. Christensen et al. (2004) describes implementing a token economy in the classroom with peer support so the teacher can focus on other parts of the lesson. The reviewed articles show a variety of ways token economies

may successfully be implemented to improve student behavior. These articles together show that token economies can be beneficial in the general education setting.

Assessment Report

Confidentiality Statement

Notice: This report contains confidential information to be made available to authorized personnel only. Although names of individuals have been removed and pseudonyms substituted, descriptions of events may still result in identification of the individual involved. Therefore, only authorized personnel (such as Utah State University course instructors) should be given access by the writer to the reports. Access to other individuals, such as school district personnel, is the responsibility of the report writer. Additionally, please note that the information contained in this result is not intended for research purposes. The process and findings reported on are solely for the sake of providing supports to a student with a disability, and improving a master's student's professional practice. The results are not generalization to a broader population or other purposes.

Setting and Participants

This project took place in a general education Grade 1 classroom and included five students without IEPs or behavior intervention plans who exhibited problem behavior (e.g., talking to their neighbor, not doing work, and not following teacher directions). The students' ages ranged from six to seven years old. These students were identified by the general education teacher as students who would benefit from an additional behavior intervention because the class wide behavior management system did not meet their needs. The identified students were

selected because the teacher believed they caused the most disruption to her teaching and other students' learning.

Prior to starting this project, the teacher used a ticket system with the whole class. If students were on task, the teacher gave them a ticket. The students could turn the tickets in to the principal and pick a prize off his treat trolley. The teacher also used a pebble system. If the whole class was on task, then the teacher put a pebble in the jar. When the class filled the jar, they picked a reward with the teacher's guidance. These different systems were used inconsistently by the general education teacher. The main form of behavior intervention the teacher used was a strike system. If the students were off task, then the teacher told them to "flip a strike," and if they got three, they lost 5 min of recess or prep. The teacher used the strike system all throughout the day and was the most consistent with it. At the end of the school year (after baseline assessment data was collected), the teacher implemented a penny system in which students could earn pennies individually for being on-task. The penny system started the week of my intervention.

During the assessment phase of the project, I collected observational and antecedent-behavior-consequence (ABC) data, conducted student preference assessments, interviewed the teacher and student teacher, and reviewed the students' current levels of academic performance. Throughout the project, I collaborated with the classroom teacher and student teacher. I have been working at the school for the last two school years as an instructional aide. The student teacher had been at the school for three months, and the general education classroom teacher has been working at the school for 15 years with eight years in her current assignment.

Observational Assessments

I collected observational data on students' on-task and problem behaviors during a 2week period. On-task was defined as the student starting the task within 5 s of the teacher asking and working at the same pace as the class. This included reading with the class when directed, writing what the teacher specified, and not talking to their neighbor. I focused on two different problem behaviors: talking to neighbors and not following teacher instructions. Talking to a neighbor was defined as discussing with another student an irrelevant topic after receiving a direction to work on a specific task (e.g., student having a conversation with another student during instruction time). Talking to another student about the assigned task was not considered problem behavior. Not following the teacher's instructions was defined as students working on problems ahead of the rest of the class, not reading what the teacher assigned, and not continuing to practice when they are done (e.g., when given a reading sheet they should keep reading repeatedly until the teacher says stop), and not following directions within 5 s. This included playing with things in their desk or doodling.

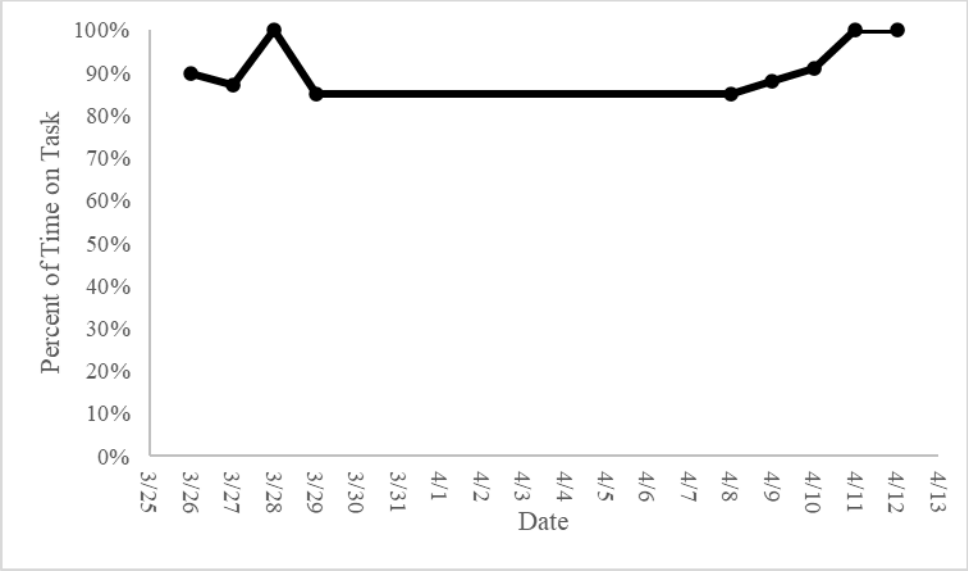
I collected momentary time sampling data during phonics, mathematics, and writing separately. Typically, students received 40 min of phonics instruction, 30 min of mathematics instruction, and 35 min of writing instruction. Sometimes the schedule fluctuated and writing was often switched with science. Every 2 min I recorded if the student was on-task; a plus sign indicated on-task behavior and a minus sign indicated off-task behavior. At the end of each lesson, I added all of the plus and minus signs to determine the total number of opportunities for on-task behavior. I then divided the total number of plus signs by the total number of opportunities for on-task behavior to determine what percent of time the student was on-task

during that lesson. To determine the percent of time on-task for each day, I computed the mean of the percent of on-task behavior for the three subjects.

Student H's daily-average percent of time on task for the 2 weeks observed ranged from 85-100%, with an overall average of 91.78% time on task. The percent of time on-task was high and the data showed a small increasing trend (see Figure 1).

Figure 1

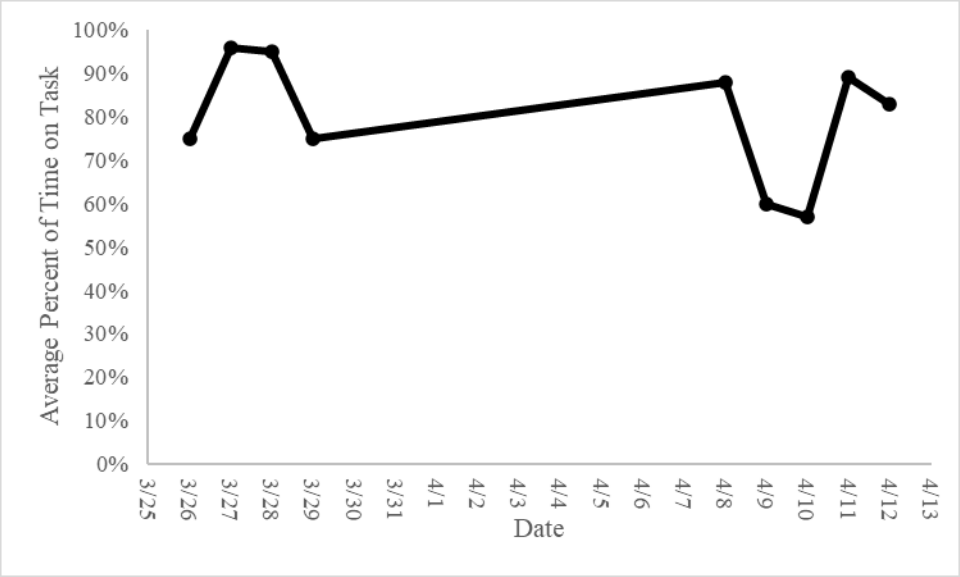
Student H Percent of Time on Task



Student Z's daily average percent of time on-task ranged from 57-96%, with an overall average of 79.78%. The graph shows a slightly decreasing trend over time (see Figure 2).

Figure 2

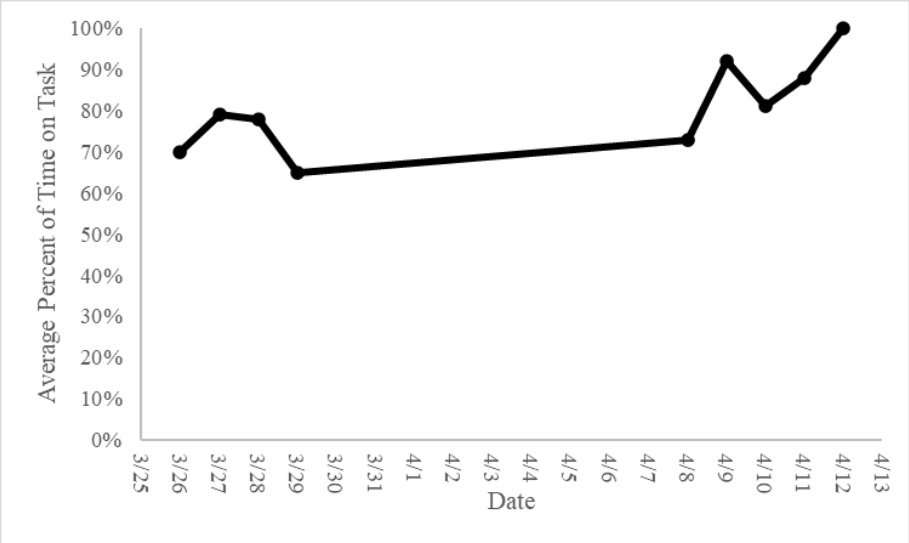
Student Z's Percent of Time on Task



Student J's daily average percent on-task ranged from 65-100%, with an overall average of 80.67%. (see Figure 3).

Figure 3

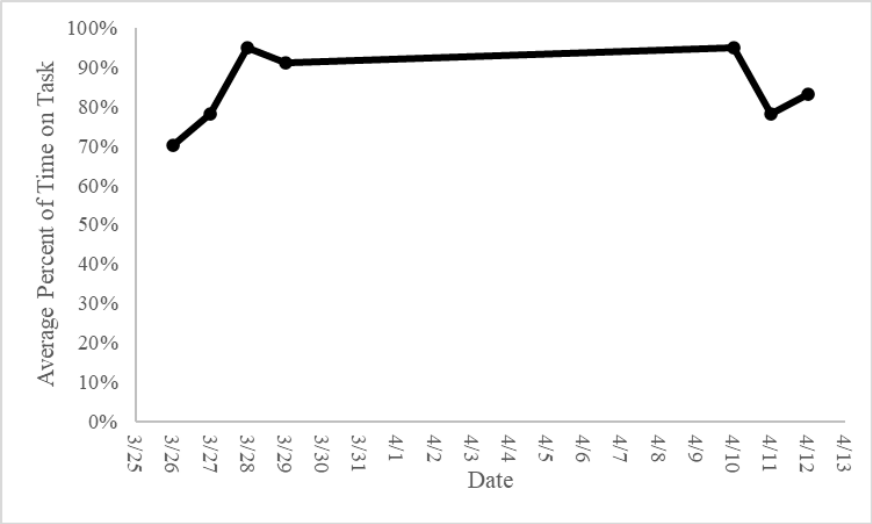
Student J's Percent of Time on Task



Student K's daily average percent of time on-task ranged from 70-95%, with an overall average for the two-week period of 84.29% (see Figure 4).

Figure 4

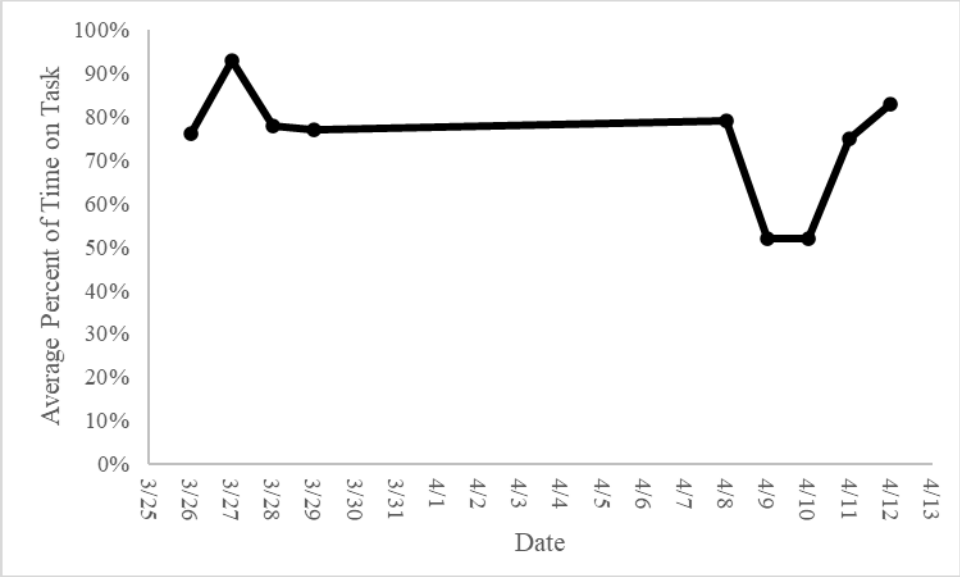
Student K's Percent of Time on Task



Student R's daily average ranged from 52-93%, with an average over the two-week period of 73.89% (see Figure 5).

Figure 5

Student R's Percent of Time on Task

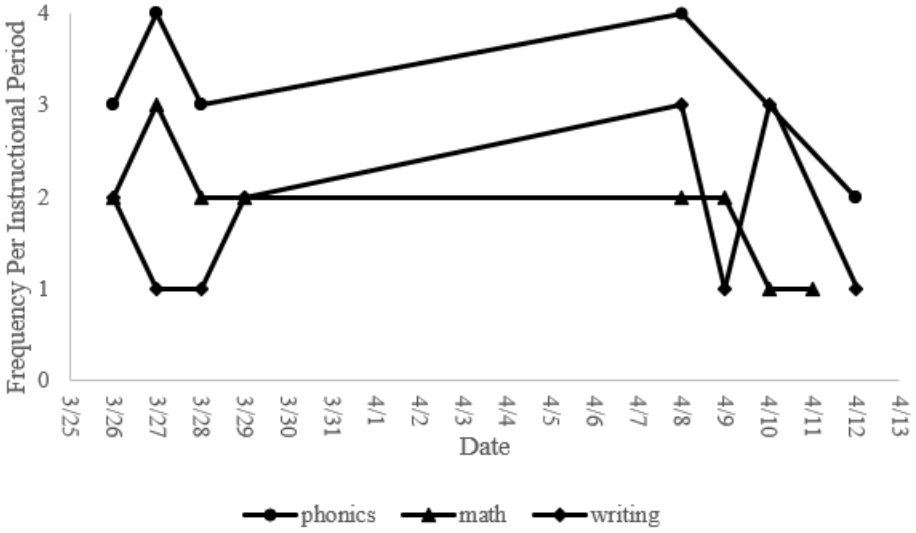


During the same observation periods, while collecting data using momentary time sampling, I tracked the frequency of behaviors. Every time the student was off-task I made a tally on my data sheet. At the end of each lesson, I added up the total occurrences of off-task behavior. The purpose of this was to see if students had a higher frequency of behavior during a certain subject, possibly indicating that the student struggled with the content or was bored.

Student H's frequency of off-task behavior per instructional period in phonics ranges from 2 to 4. In mathematics from 1 to 3. In writing from 1 to three. You can see from the graph in the first week that in a day phonics typically has the most behaviors, then mathematics, then writing. In the second week Phonics still had the most behaviors then writing and mathematics switched. The average frequency of behavior in phonics is 3.2. The average frequency of behavior in mathematics is 1.88. The average frequency of behavior in writing is 1.75.

Figure 6

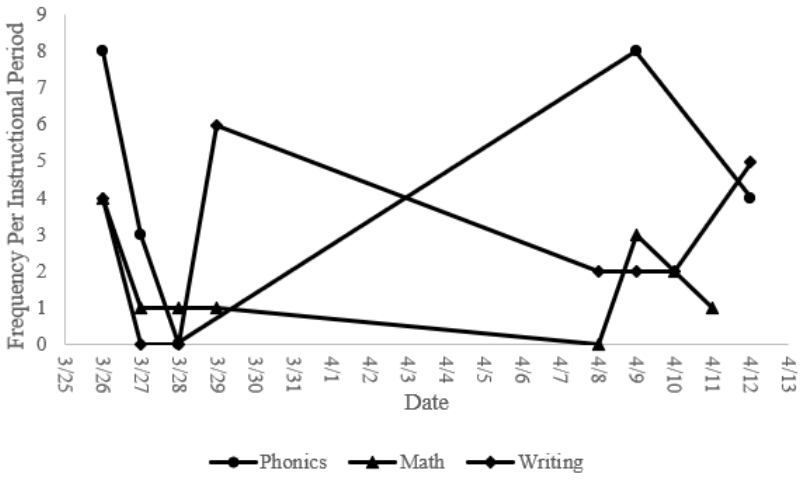
Student H's Frequency of Behavior



Student Z's frequency of off-task behavior per instructional period. In phonics ranges from 0 to 8. In mathematics from 0 to 4. In writing from 0 to 6. The average frequency of behavior in phonics is 4.6. The average frequency of behavior in mathematics is 1.63. The average frequency of behavior in writing is 2.63. Student Z has the highest frequency of behaviors in phonics, then in writing and last mathematics. There is a significant gap between phonics and the other lessons.

Figure 7

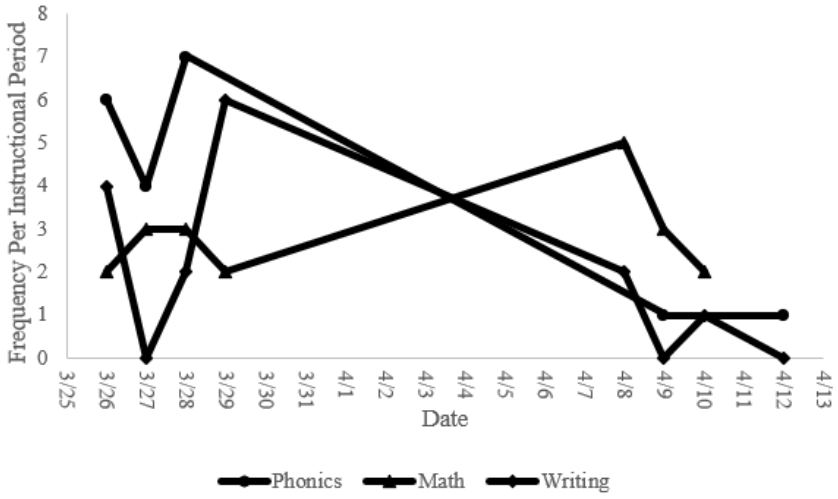
Student Z's Frequency of Behavior



Student J's frequency of off-task behavior per instructional period in phonics ranges from 1 to 7. In mathematics from 2 to 5. In writing from 0 to 6. The average frequency of behavior in phonics is 3.8. The average frequency of behavior in mathematics is 2.86. The average frequency of behavior in writing is 1.88. Analyzing the averages shows that on average phonics has the most behaviors, then mathematics, then writing. Looking at the graph shows that the behaviors between lessons are variable per day.

Figure 8

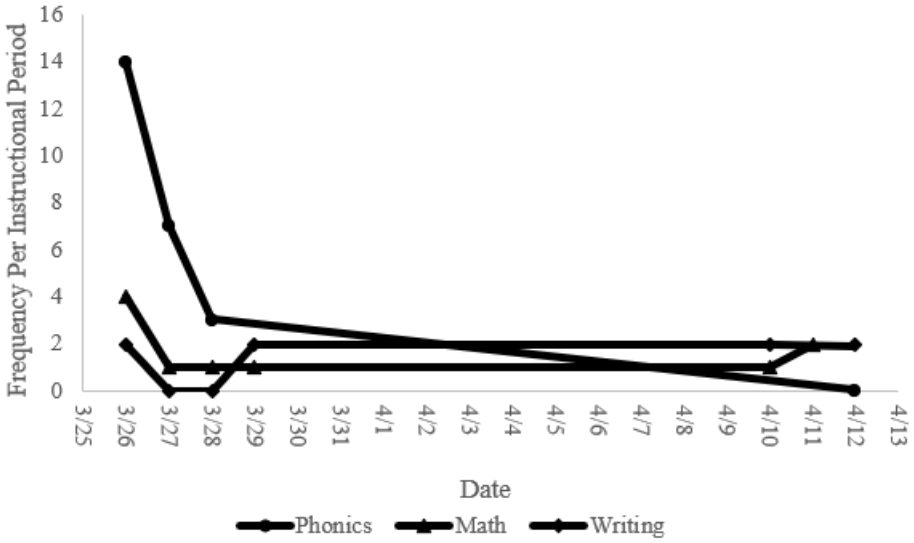
Student J's Frequency of Behavior



Student K's frequency of off-task behavior per instructional period in phonics ranges from 0 to 14. In mathematics from 1 to 4. In writing from 0 to 2. The average frequency of behavior in phonics is 6. The average frequency of behavior in mathematics is 1.67. The average frequency of behavior in writing is 1.33. For student K there is a significant gap between the average of behaviors in phonics in comparison to the other two lessons.

Figure 9

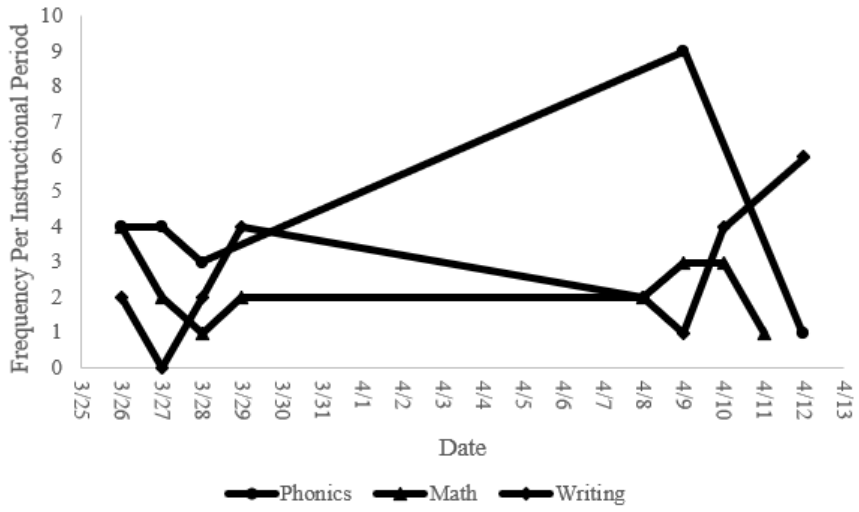
Student K's Frequency of Behavior



Student R's frequency of off-task behavior per instructional period in phonics ranges from 1 to 9. In mathematics from 1 to 4. In writing from 0 to 6. The average frequency of behavior in phonics is 4.2. The average frequency of behavior in mathematics is 2.25. The average frequency of behavior in writing is 2.63. Student R has an average higher frequency of behavior in Phonics.

Figure 10

Student R's Frequency of Behavior



Focus Students Current Grades and Performance Level

I looked at each student's grades and performance relative to below benchmark to determine if their understanding of the subject could be impacting their behavior. For Phonics, I gathered their Acadience reading scores, Core Phonics test scores, and Saxon Phonics scores. For Mathematics, I gathered the Acadience math scores and GoMath scores. For writing, collected a permanent product of each student's writing. I assessed capitalization, proper punctuation, word spacing, and general content. I did not collect academic achievement data when the class did science instead of writing.

Student H's Acadience reading score was above benchmark. The Core Phonics score showed a need for strategic support in two of the 10 areas (Letter Name Lowercase and Consonant blends with short vowels). He was very close to being at benchmark in these areas. He scored 98% correct on the Saxon Phonics assessment. Mathematics Acadience data indicated he was at benchmark or above benchmark. His GoMathscore was 100%. Student H remembered

all capitals, punctuation, spaces, and his writing made sense during the one writing assessment. Student H was doing very well in all of his academic areas.

Student Z 's Acadience reading was well below benchmark and indicated a need for intensive support in three of five areas, he was below benchmark in one of five areas, and at benchmark in one of five areas. His Reading Composite Score, Nonsense Word Fluency-Correct Letter Sounds, Oral Reading Fluency words correct per minute, and Oral Reading Fluency Accuracy were well below benchmark. His Core Phonics scores showed he needed strategic support in four of 10 areas (Letter Names-Capital, Letter Names-lowercase, Consonant blends with short vowels, and Short vowels, digraphs, and –tch trigraph) and intensive support in one of 10 areas (r-controlled vowels). His Saxon Phonics score was 79% correct. Student Z's Acadience mathematics score showed he was below benchmark in one of four areas (Advanced Quantitative Discrimination), at benchmark in two of four areas (overall Math Composite Score and Computation), and above benchmark in one of five areas (Missing Number Fluency). He scored 97.54% correct on the GoMath assessment. During the one writing observation, he remembered all capitals, punctuation, spaces, and his writing made sense. Student J's Acadience reading score was above benchmark. Core Phonics results show he was at benchmark. His Saxon Phonics score was 100% correct, and his Acadience mathematics score was above benchmark. His GoMath score was 97.85% correct. Student J forgot punctuation during the one writing observation. Student J was above benchmark in literacy and mathematics.

Student K's reading Acadiance scores were at or above benchmark. Core Phonics scores showed that he needed strategic support in three of 10 subtests (Letter Names-lowercase, Consonant sounds, and Consonant blends with short vowels). Student K's Saxon Phonics score was 96% correct. His mathematics Acadience results showed he was well below benchmark in

one of four areas (Computation), below benchmark in two areas (Math Composite score and Advanced Quantity Discrimination), and at benchmark in one area (Missing Number Fluency). His GoMath score was 91.8% correct. During the one writing observation, Student K did not use capitals.

Student R was below benchmark in the retell portion of the Acadience reading assessment. Core Phonics results showed he was in need of strategic support in four subtests (Consonant blends with short vowels, Short vowels, digraphs, and –tch trigraphs, R-controlled vowels, and Long vowel spelling). His overall Saxon Phonics score was 96% correct. Student R was above benchmark on the mathematics Acadience assessment. His overall GoMath score was 99.18% correct. During the one writing observation, Student R remembered all capitals, punctuation, spaces, and his writing made sense. Student R's frequency of off-task behavior fluctuated between each subject daily suggesting his understanding in each subject did not affect his behavior.

Teacher report and interview

Due to the classroom teacher being rushed for time, I asked her questions and wrote her responses. Questions focused on her rationale for choosing the selected students, desired and undesired student behaviors, and existing classroom management practices. Table 1 shows the questions I asked and summarizes the teacher's answers.

Table 1

Teacher Interview Questions and Answer Summaries

Question	Summarized Answer
1. Why did you pick this student?	The teacher felt like she was needing to remind the students frequently to stay on-task, do their work, and stop talking. She felt the current system wasn't working, so she thought they would benefit from something extra. These students also strike out often.
2. Is there a specific behavior you would like to see changed? If so which one?	The behaviors she would like to see changed were, talking to neighbor, playing in desk, and not getting work done with the class.
3. What has been used in the past to discipline students?	The teacher brought of the strike system and said, students need to stay in for 5 min of recess or prep if they get a strike out.
4. What system is in place to help with behavior?	The system she mentioned is, students earn a strike when they are off task and when they get three, they miss 5 min of recess or prep.
5. What specific interventions if any have been used to help these specific students?	Her response was, Just the strike system and talking to them about what they need to change.

I observed the teacher using two other systems she did not mention when responding to Question 4. The first is a school-wide reinforcement system where students can earn a ticket if they are being safe, respectful, or responsible. The tickets are turned into the office and the students can get something off the treat trolley the principal brings around when they earn a certain number. The second is a system where the teacher puts pebbles in a jar when the whole class is on task. When the jar gets full, the students earn something the whole class picked (e.g., a pajama day or they can bring a stuffed animal to school).

Preference assessment

In order to determine the student's preferred reinforcers, I administered two different preference assessments. The first was a forced choice preference assessment used to determine the type of reinforcer the students would most prefer. I used the Forced-Choice Reinforcement Menu modified from Determining the motivational systems of individual children (Gable, 1991). Results of this assessment suggested three out of five students preferred consumable rewards, one student preferred independent rewards and consumable rewards equally, and one student preferred peer approval most. The second preference assessment was a forced choice preference assessment I created based on results from the first preference assessment and the teacher's preferences for reinforcers. The options for the second preference assessment were skittles, M&M's, chips, a dime, and gum. Of note, the teacher implemented a new system that allowed students to earn pennies and buy things from a class store at the end of the week I administered the preference assessments. This system was implemented the last 2 days of baseline as well.

Figure 11 presents results of Student H's preference assessments. Student H's first preference assessment results showed that adult and peer approval were the most preferred type of reinforcement. Per the teacher's request, I did not include this type of reinforcer in the second preference assessment because she did not think she would have time to deliver the reinforcer and did not think it was fair to let him have more time with peers than other students through the day. She was concerned other students would be sad if they could not also earn extra time with a peer. To include Student H's preference of adult approval, I decided to provide adult attention as reinforcement in the intervention even though it is not something he could officially earn. Results of the second preference assessment show Student H's top two choices were skittles or earning a dime.

Figure 11

Student H's Preference Assessment Results

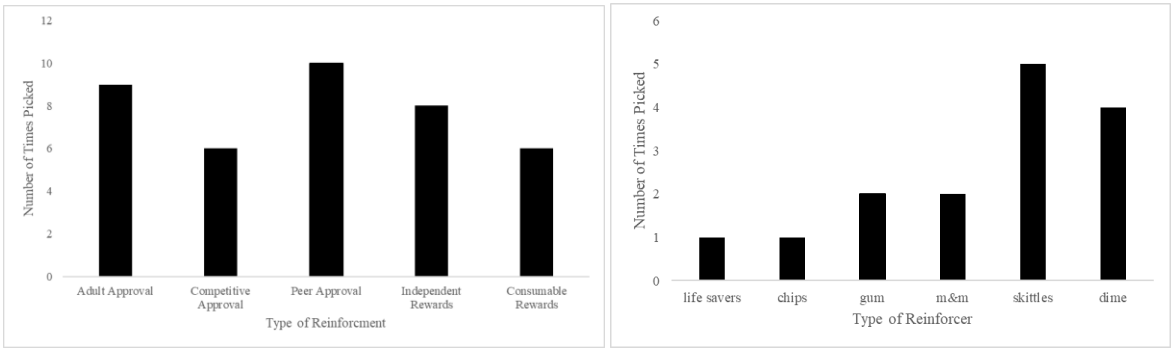


Figure 12 presents Student Z's preference assessment results. Student Z picked Independent Rewards and Consumable Rewards 13 times each when completing the first preference assessment. The teacher did not think it would be fair to the other students if he got to do something independently, they couldn't and she was concerned about time to provide and independent reward, so I did not include that option in the second preference assessment. Results of the second preference assessment indicate Student Z preferred Skittles most.

Figure 12

Student Z's Preference Assessment Results

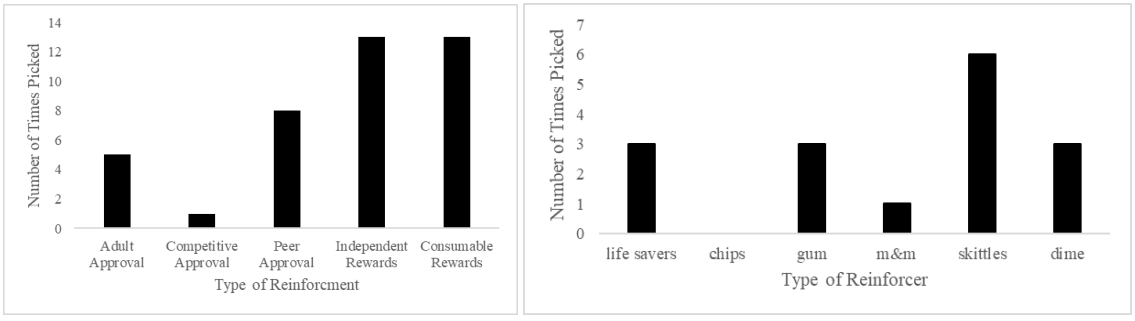


Figure 13 presents Student J's preference assessment results. Student J picked Consumable Rewards 14 times during the first preference assessment. Results of the second preference assessment show that gum, M&Ms, skittles, and dime were each selected three times.

Figure 13

Student J's Preference Assessment Results

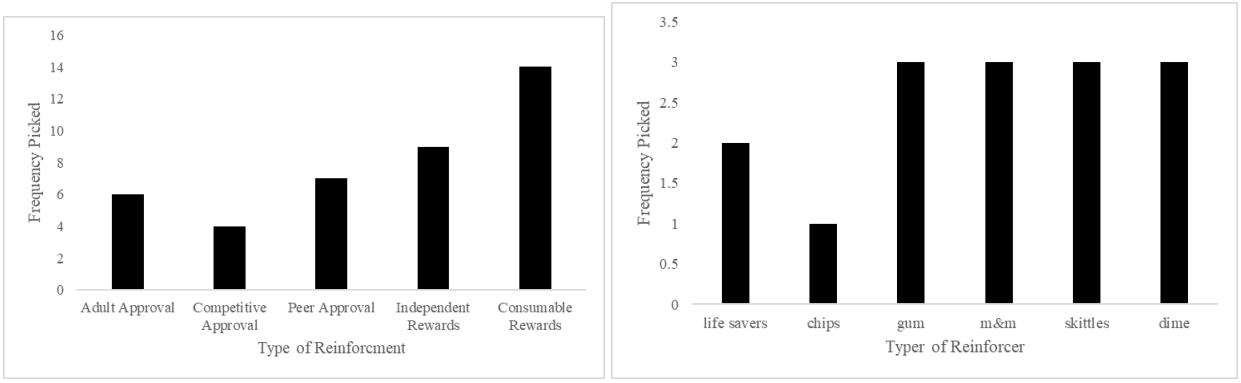


Figure 14 presents Student K's preference assessment results. Student K selected Consumable Rewards most frequently during the first preference assessment. During the second preference assessment, Student K chose Skittles five times. Interestingly, a few hours after this assessment was given, the student asked me if he could pick the type of chips. I said yes, and he asked if I could get cheddar sun chips.

Figure 14

Student K's Preference Assessment Results2e

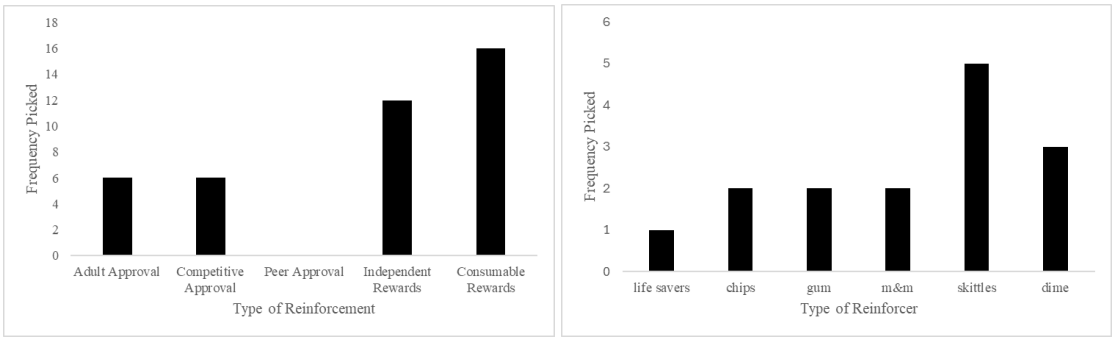
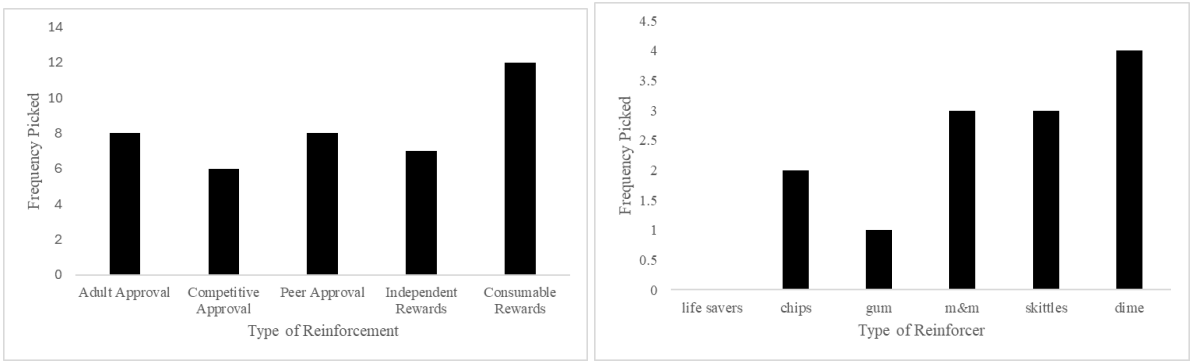


Figure 15 presents Student R's preference assessment results. Student R picked Consumable Rewards most during the first preference assessment. During the second preference assessment, the student picked dimes the most. I find this interesting because it is the one non-consumable option. The next most frequently selected reinforcers were M&Ms and Skittles, both selected three times. This student repeatedly requested that we complete more preference assessment items. He liked me trying to figure out what he liked the most and wanted to see the results. He was disappointed that I only administered two assessments.

Figure 15

Student R's Preference Assessment Results.



ABC (Antecedent Behavior Consequence) Assessment

I endeavored to watch each student individually for 10 min for one day during Phonics, Mathematics, and Writing and recorded the antecedent, behavior, and consequence for every off-task behavior I noticed (see Appendix A). This was not always possible because I was also a classroom aide and could not always give all of my attention to the student I was watching. I was only able to watch Students K and R for 10 min one time during science (which took place instead of writing due to schedule changes during the week assessment data was taken).

Figure 16 presents Student H's ABC results. Finishing his work or the teacher giving whole group instruction appeared to be antecedents to the student talking to his neighbor, fidgeting, and going ahead on the assignment. Notably, the teacher's expectations were the same for both of these antecedents; the student was expected to sit still in their seat with their pencil down and their hands on the desk with their voices off. Sometimes the teacher would reprimand the student as a consequence of the behavior, but the results show most times the teacher did not notice the off-task behavior and nothing happened. The data suggests Student H was avoiding sitting still at his desk and keeping quiet by fidgeting and talking with his neighbors. Student H may be getting bored, as his ABC data shows his behavior often happened when he finished his work and his academic scores show that he was doing very well in every subject. I believe he continued to engage in these behaviors because there was not enough reinforcement to stop. If it were my class, I would allow him to have a quiet fidget to play with when he finished his work or teach a replacement behavior. However, in the current setting he was expected to sit still with his hands on the desk. Since student H's behaviors happen during the time he is supposed to be sitting still, his function of behavior is most likely task avoidance. He would benefit from an intervention where he could get reinforced for sitting in his desk quietly and not fidgeting.

Figure 16

Student H's ABC Data

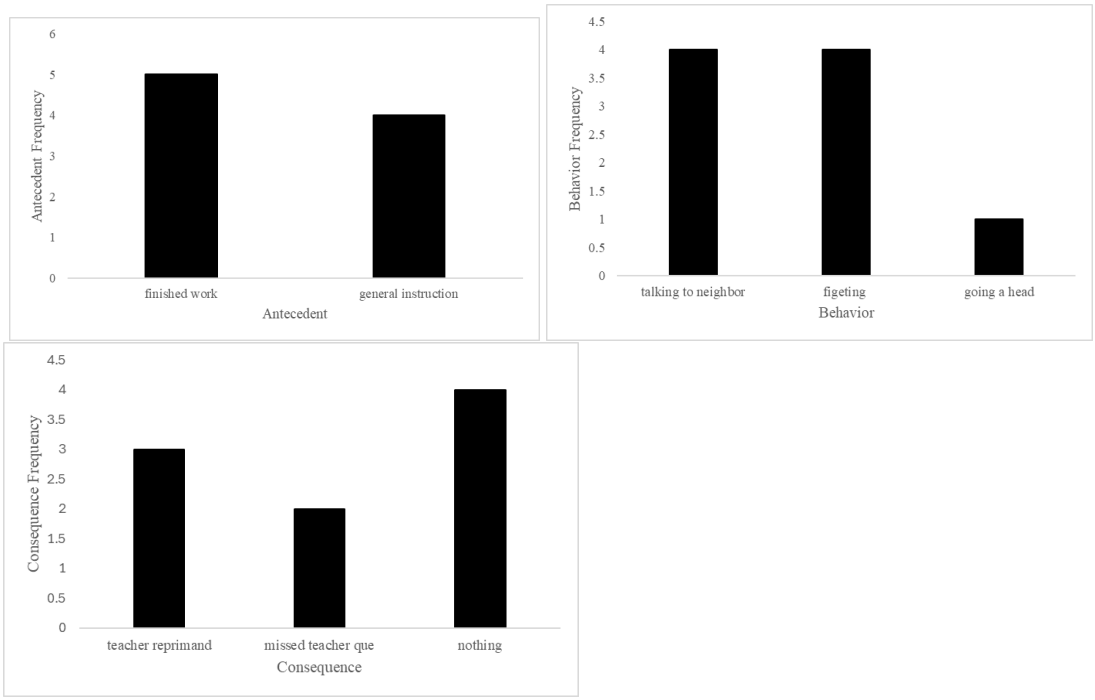


Figure 17 presents Student Z's ABC results. Student Z struggled with behavior the most during transition periods (e.g., following directions when coming in from recess or switching from a marker to a pencil). Once he was on-task he would stay on-task until the next transition or if he missed too much and did not understand what was going on. Results show Student Z mostly fidgeted with things in and on the desk or shoes and articles of clothing. He also sometimes talked to his neighbor or did not do the class work. All of these behaviors led to the student falling behind the class and not completing his work. The consequences of the off-task behaviors appeared to be teacher reprimands, reminders to focus, or nothing. The teacher often successfully redirected him during observations. The data suggest the function of Student Z's behavior was

task avoidance. Student Z seems to be avoiding the task of sitting still and would benefit from an additional behavior intervention to help motivate him to get on-task right away and not engage in off-task behaviors when transitioning.

Figure 17

Student Z's ABC Data

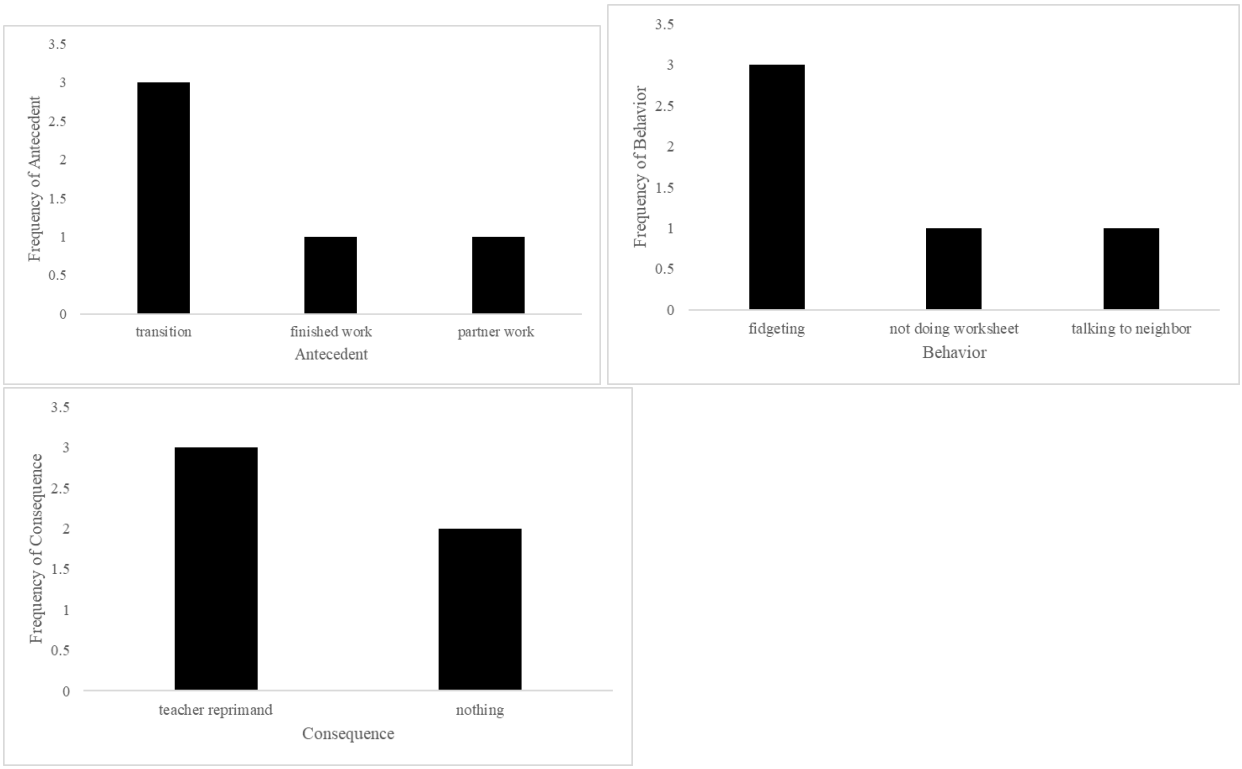
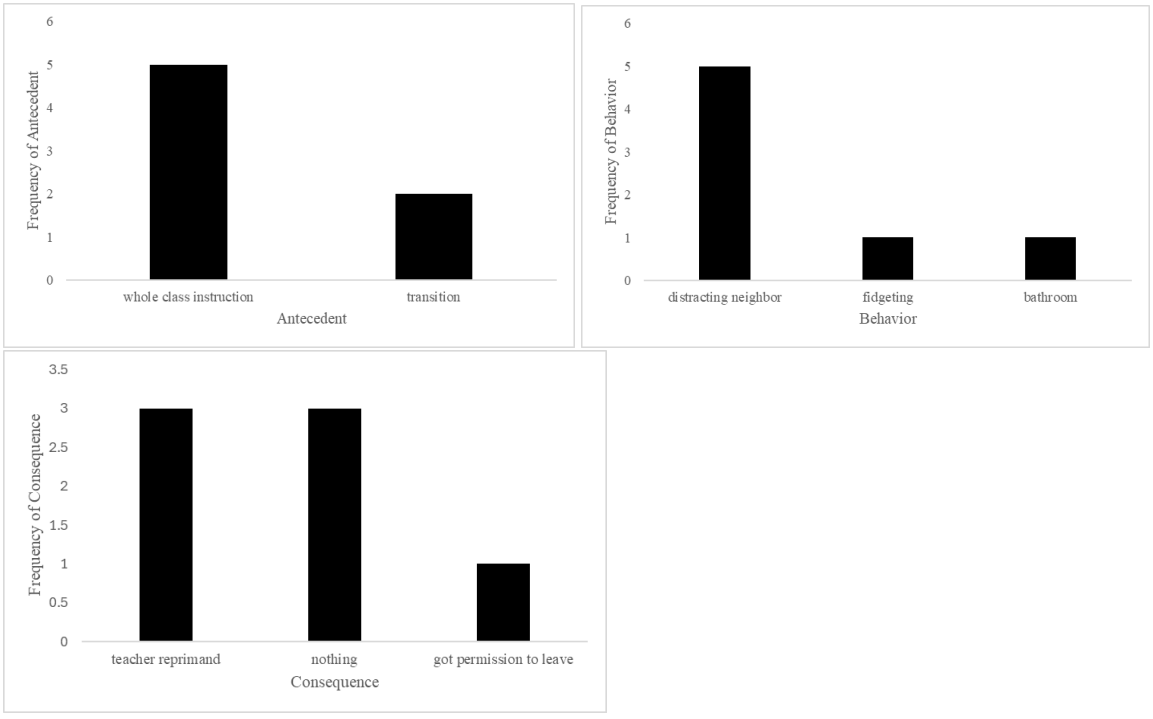


Figure 18 presents Student J's ABC results. Student J appeared to have difficulty focusing during whole class instruction and occasionally during transitions. Student J often distracted his neighbor; this could include poking or touching them, talking to them, or touching their desk. Other behaviors that were observed included fidgeting and needing to use the bathroom excessively. In response to the off-task behavior, the teacher reprimanded, did nothing, or gave permission to use the bathroom. The observed consequences resulted in the student not

getting his classwork done. The data suggest a dual function of behavior: attention seeking and task avoidance. Creating a tier two intervention system where the student gets positive attention and earns something for doing work would benefit Student J.

Figure 18

Student J's ABC Results



I did not graph ABC data for Students K and Student R due to observing a limited number of behaviors. I observed Student K once during science for 10 min. During that time the task given was to write in their science booklet about their observations for the day. I observed Student K messing around with things in his desk and talking to a friend. I did not observe a consequence from the teacher. This suggests task avoidance may be the function of student K's

behavior, although the function cannot be determined using the limited data. Student K would likely benefit from an intervention system that motivates him to work on class work.

I also only observed Student R once during science for 10 min. I observed him when the class was doing an experiment that involved talking in cup phones. During this time, I observed him playing with things in another student's desk. I did not observe a consequence for this behavior. The student appeared to be avoiding completing an assigned task. The student would probably benefit from an intervention system that reinforces him getting his work done.

Reflection

The above results show that each of these students would benefit from a tier two intervention to help motivate them to follow directions and remain on-task. I will use a token system to help motivate and provide positive reinforcement for good behavior in addition to the strike system the teacher is currently using for discipline. Based on the preference assessments, I will use reinforcers to help motivate the students during the intervention phase of the project.

Collecting completely accurate data was more difficult than I anticipated. As a result of gathering this data, I have more sympathy toward general education teachers. I began this phase of the project with the idea that I would set a timer and carry around my data sheets collecting accurate data. In reality, students would come and talk to me, and I could not always look at the five target students at the exact moment I was supposed to collect data. Going forward in my career, I will better be able to recognize how hard implementing behavior plans and taking accurate data while also teaching in the general education classroom can be. It is hard to pay attention to one student when there are 34 other students with other needs all asking questions and needing support. I also recognize that I would have made an intervention specific to each student if I had collected this data for a Behavior Intervention Plan. For example, I would have

included some peer and adult approval options when administering the second preference assessment for Student H. Additionally, I would not create five tier two intervention systems but would create one system that would work for all the students and their needs.

Intervention Report

Confidentiality Statement

Notice: This report contains confidential information to be made available to authorized personnel only. Although names of individuals have been removed and pseudonyms substituted, descriptions of events may still result in identification of the individual involved. Therefore, only authorized personnel (such as Utah State University course instructors) should be given access by the writer to the reports. Access to other individuals, such as school district personnel, is the responsibility of the report writer. Additionally, please note that the information contained in this result is not intended for research purposes. The process and findings reported on are solely for the sake of providing supports to a student with a disability, and improving a master's student's professional practice. The results are not generalization to a broader population or other purposes.

Setting and Participants

This project took place in a general education Grade 1 classroom and included five students without IEPs or behavior intervention plans who exhibited problem behavior (e.g., talking to their neighbor, not doing work, and not following teacher directions). The students' ages ranged from six to seven years old. These students were identified by the general education teacher as students who would benefit from an additional behavior intervention because the class wide behavior management system did not meet their needs. The identified students were

selected because the teacher believed they caused the most disruption to her teaching and other students' learning.

As described in the assessment report, the teacher used multiple systems for managing student behavior when I started this project (tickets and pennies for good behavior, strikes for undesired behavior). During the assessment phase of the project, I collected observational and antecedent-behavior-consequence (ABC) data, conducted student preference assessments, interviewed the teacher and student teacher, and reviewed the students' current levels of academic performance. Throughout the project, I collaborated with the classroom teacher and student teacher. I have been working at the school for the last two school years as an instructional aide. The student teacher has been at the school for three months, and the general education classroom teacher has been working at the school for 15 years with eight years in her current assignment. The student teacher's last full week was the last week of baseline and they substituted the last two days of the first week of intervention.

Baseline

I collected momentary time sampling data during phonics, mathematics, and writing instruction. Typically, students received 40 min of phonics instruction, 30 min of mathematics instruction, and 35 min of writing instruction. Sometimes the schedule fluctuated and writing was often switched with science. Every two min I recorded if the student was on-task; a plus sign indicated on-task behavior and a minus sign indicated off-task behavior. At the end of each lesson, I added all of the plus and minus signs to determine the total number of opportunities for on-task behavior. I then divided the total number of plus signs by the total number of opportunities for on-task behavior to determine what percent of time the student was on-task

during that lesson. To determine the percent of time on-task for each day, I computed the mean of the percent of on-task behavior for the three subjects.

While baseline data was being collected the teacher implemented the strike system that was already in place. If students were off-task or disrupting instruction, the teacher gave them a strike. If the student received three strikes, they lost 5 min of recess and talked to the teacher about why they earned the strikes and what could be done differently to help the student focus.

Intervention

This intervention included two different forms of token charts. Figure 19 is an example of Chart 1. When a student used Chart 1, I walked around the classroom and gave a star every five min if they were on-task. If they were off task, they received a slash. If they received a star, I provided praise, and if they got a slash, I told them why they did not receive the star. At the end of the day, I counted the number of opportunities for feedback and the number of stars earned. I divided the stars by total opportunities to determine their percent of total time on-task for the day. If the percent was 80% or higher, they would receive their reinforcer for the day. When using Chart 1, the students frequently asked me if they were receiving their reinforcer throughout the day and it distracted them from their assigned task(s). Student K, especially, would ask every time I walked by. In response, I created Chart 2 so the students could see if they were earning a reinforcer (see Figure 20). When using Chart 2, I gave the students a star every 5 min if they were on-task and did not record anything if they were off-task. If the students earned enough stars to reach a pre-printed star on the chart, they earned the reinforcer. These stars are placed every 8 boxes on the chart. At the beginning of the intervention, all students used Chart 1. After one week of intervention, Student J continued using Chart 1 and the other four students switched to Chart 2. Student J kept using Chart 1 because we could already see an improvement in

behavior and he did not care that he did not know until the end if he earned a reinforcer or not. As noted before, the teacher started a new behavior system in conjunction with the strike system the last two days of baseline data and continued implementing the new system throughout this intervention. The new system involved students earning pennies for being on-task.

Figure 19

Chart 1

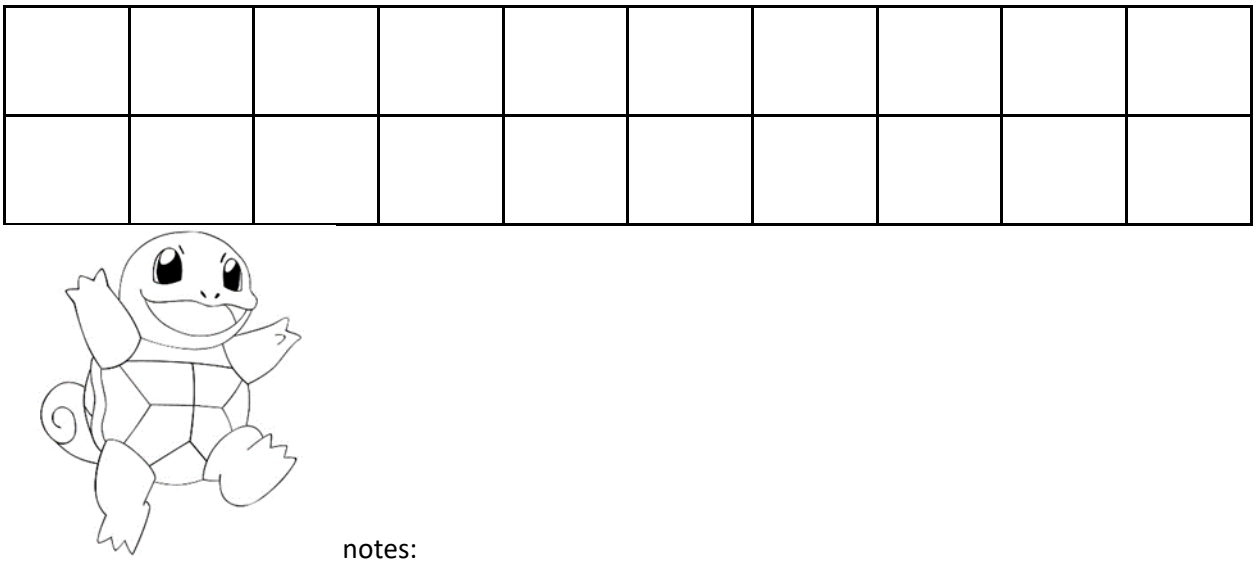
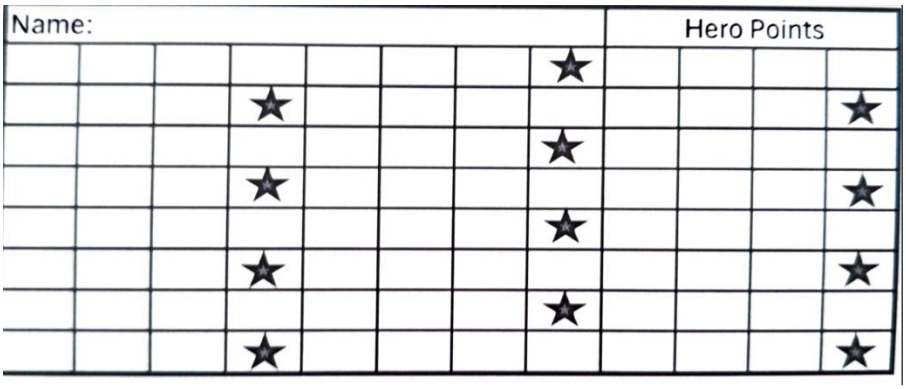


Figure 20

Chart 2



Procedures

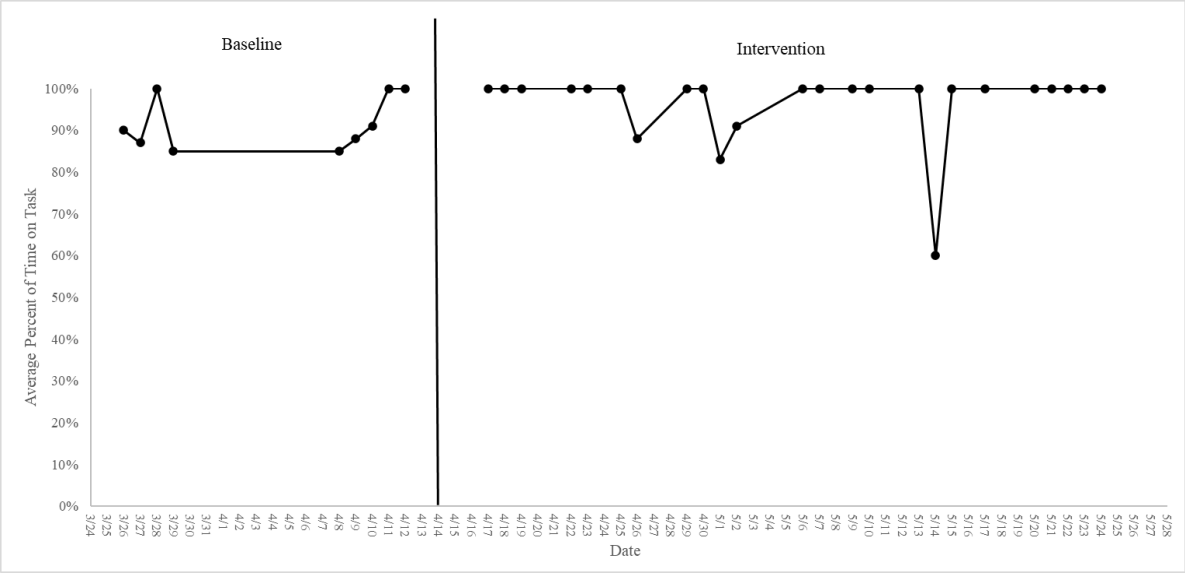
Each student earned a star every 5 min if they were on-task. If students were off-task and using Chart 1, they received a slash. If they were using Chart 2, they did not receive any marks. If the percent of time on-task for the whole day was 80% or greater when using Chart 1, then the students received the reinforcer. If they received enough stars to reach a pre-printed star when using Chart 2, then they received the reinforcer. Students could choose between bubble gum, Sun Chips, a dime, Skittles, or M&Ms as reinforcers. Additionally, when students filled Chart 2 they had the opportunity to choose a prize from the teacher's treasure box. Student J had access to the treasure box when he earned 100% for the day because he continued using Chart 1. Student J needed 100% to earn a treasure, based on data he was able to earn 100% often enough to earn something from the treasure box as often as the other students. I collected the students' charts at the end of each day so I could divide the total number of stars earned by the students' opportunities to be on-task to determine the total percent of time on-task for that day. I then put the charts back on each student's desk and provided Student J with a new chart for the next day.

Results

During baseline, Student H's daily average percent of time on-task ranged from 85-100%, with a mean of 91.78%. During Intervention, Student H's daily average percent of time on-task ranged from 60-100%, with an overall mean of 96.75%. Although intervention data shows more variability than baseline, Student H experienced an increase in time on-task during intervention (see Figure 21).

Figure 21

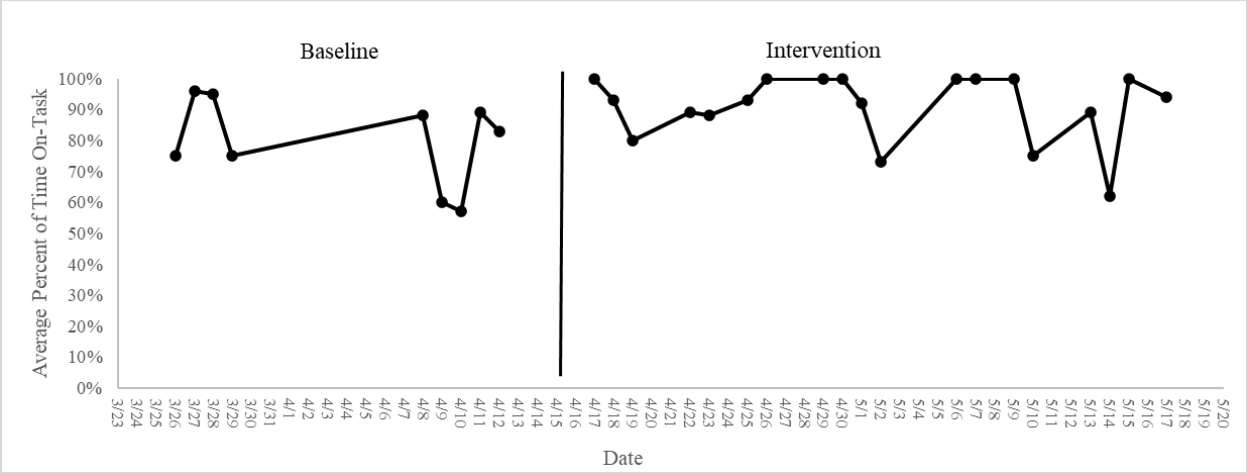
Student H's Average Percent of Time On-Task



Student Z's daily average mean of time on-task during baseline ranged from 57-96%, with an overall mean of 79.78% time on-task each day. During intervention, the daily mean percent of time on-task ranged from 62-100%, with an overall mean of 90.95%. Although Student Z's data continued to show variability, this is a significant increase in time on-task during intervention (see Figure 22).

Figure 22

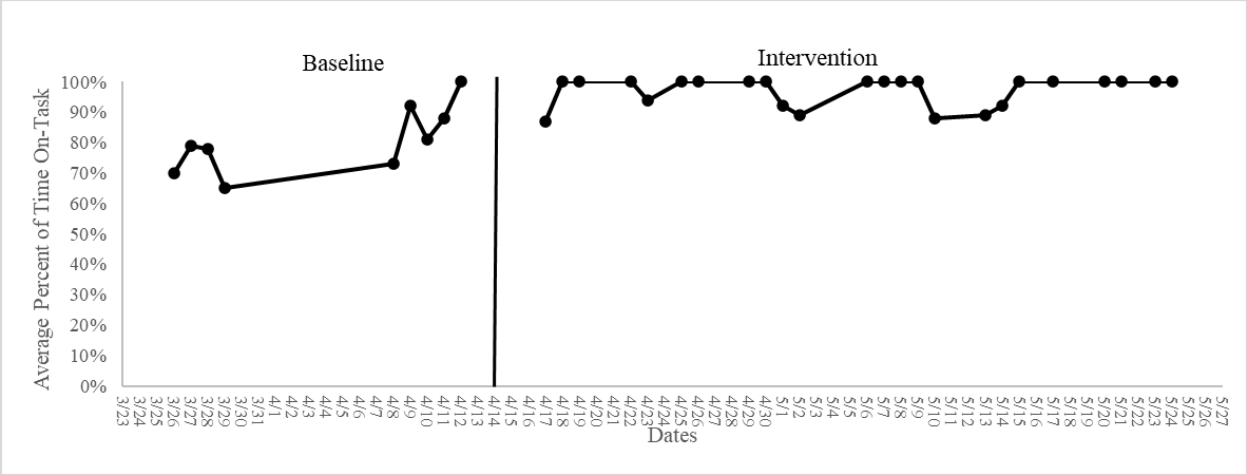
Student Z's Average Percent of Time On-Task



During baseline, Student J's daily mean of time on-task ranged from 65-100%, with an overall mean of 80.67%. During intervention, the daily mean of time on-task ranged from 87-100%, with an overall mean of 97.13%. This shows a massive increase of time on-task during intervention and variability within the data decreased (see Figure 23).

Figure 23

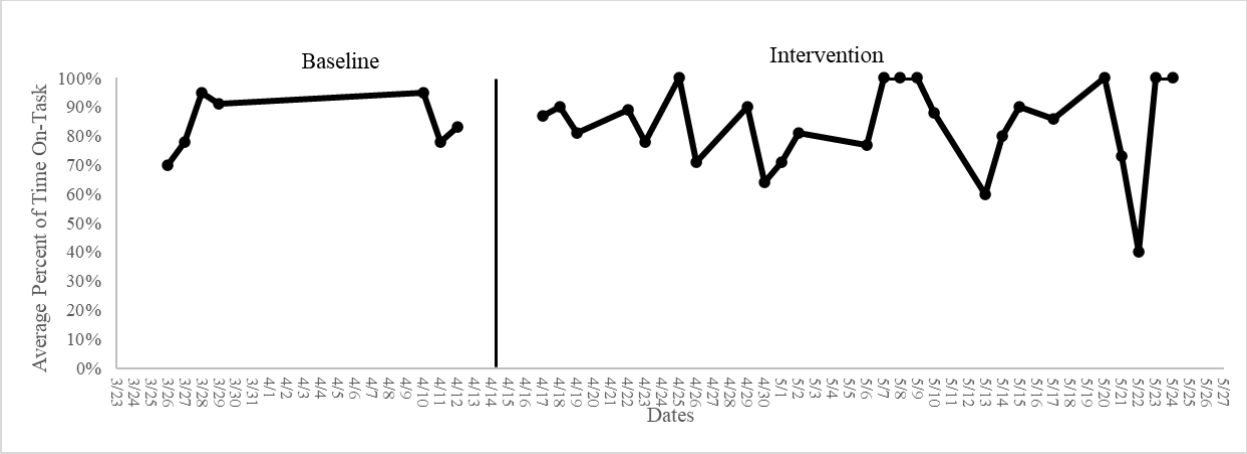
Student J's Average Percent of Time On-Task



Student K's daily mean percent of time on-task during baseline ranged from 70-95%, with an overall mean of 84.29%. During intervention, the mean ranged from 40-100%, with an overall mean of 83.84%. This student's average time one task slightly decreased during intervention (see figure 24).

Figure 24

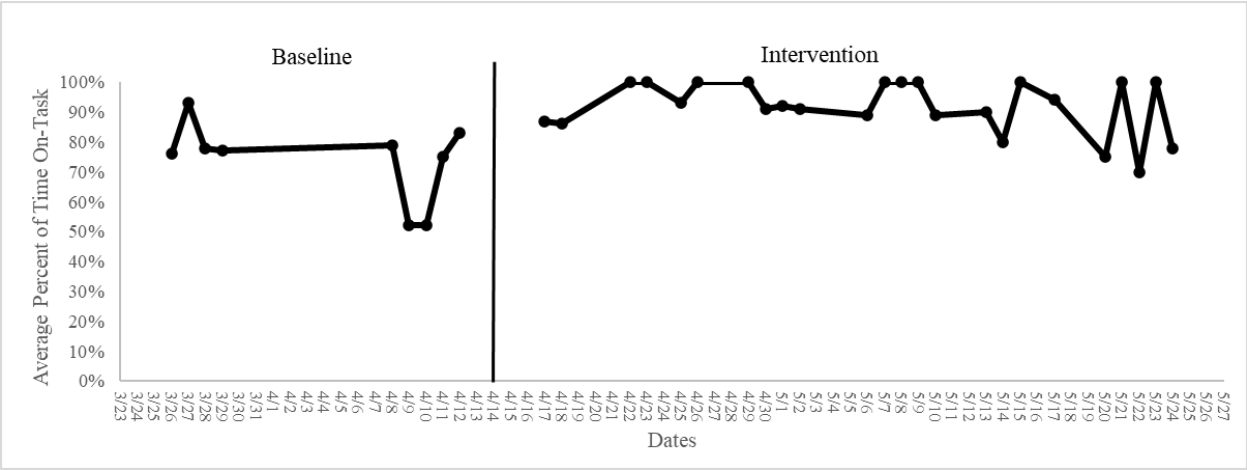
Student K's Average Percent of Time On-Task



During Baseline, student R's daily mean ranged from 52-93% of time on-task, with an overall mean of 73.89%. During intervention, student R's daily mean of time on-task ranged from 70-100%, and the overall mean of daily time on-task was 88.2%. This is a significant increase in mean time on-task between baseline and intervention, and the variability in the data decreased (see Figure 25).

Figure 25

Student R's Average Percent of Time On-Task



The results show that for four out of the five students time on-task increased after the tier two intervention was put in place. The students benefited from a positive reinforcement system where they earned a reinforcer for being on-task instead of only receiving strikes when off-task. Earning a star every 5 min and then earning a preferred reinforcer had a positive impact on student behavior. Student J, in particular, really enjoyed receiving the stars and positive praise every 5 min. I found the intervention helpful because it allowed me to give positive praise to students who did not often get it.

Implementation Fidelity

I did not collect fidelity data when I implemented the intervention. During baseline the general education teacher took frequency data twice on the student's behavior. She did this because I was assigned to a different classroom during phonics and writing. She did not take data every 2 min and write a plus or minus sign, only frequency data. One day she observed during writing time and the other one was during phonics. During one week of intervention, I had a

substitute for two days. She observed me implement the intervention before I left. While I was gone, she completed a checklist that included space to mark if the students did not earn a star, why the star(s) were not earned, and how many stars they earned each day. She took detailed notes and explained any deviations from the implementation plan (e.g. on the last day in the afternoon no data was taken because she needed to help somewhere else in the school). Fidelity was not perfect due to me sometimes forgetting to restart my timer or other students needing my attention so I could not give the student a star in the exact moment. I would always make sure to give the student the star they earned as soon as I could.

Social Validity Check

I conducted a social validity check with each of the five students and the general classroom teacher. For each student I asked two questions: 1) Do you think the chart helped with your behavior and helped you not talk to your neighbor and get your work done? and 2) Would you do something like this again? All of the students answered yes to the first question. Students H, Z, and J answered yes to the second question, and Students K and R answered no. Student R's answer surprised me because he had asked to do something like this prior to beginning the intervention. He also asked me if he could take a chart home because he wanted to do something similar at home or in the next grade. I also asked the general education teacher additional questions. Table 2 shows the questions and summaries of her responses.

Table 2

Teacher Social Validity Check

Questions	Responses
Did it help?	Yes, it definitely did! She especially noticed a difference with Student H and Student J.
What didn't work?	Thinks it worked really well but some students learned to play the system. She felt like Student K especially would figure out exactly how many stars he would get and once he earned the big one would stop. He also would tend to be on-task when I was in the room and then be off-task once I left.
Would she do something like this again?	She said she would definitely do something like this again but would need to make modifications. She would give them stars when she could. She also would have the prizes be something she already had, and wouldn't ask preference.

Reflection

I grew professionally in many ways during this project. First, this was the first time I was able to apply what I learned in classes about collecting and using student data to create behavior interventions. Second, I had to collaborate with the classroom teacher to figure out what would work in her class. As a resource teacher, I will always have to collaborate with the classroom teachers to create plans that work in their classrooms. I will need to build strong relationships and earn their trust. This project gave me a great opportunity to do that. Third, I learned that creating a system that involves giving students positive praise and preferred reinforcers strengthened my relationship with the students. After starting the intervention, the students told me more about their days and lives and wanted to talk to me. When I started this project, my focus was not on creating a positive behavior system but on investigating if using a token system would impact student behavior. Previously, the students typically received only strikes which

means they only received adult attention when they did something wrong. For Student J the positive attention during the intervention was impactful; his behavior improved because he liked me pointing out what he was doing well. For most of the other students, earning a preferred reinforcer increased their on-task behavior. Adding the new system of giving pennies compliments the intervention by showing that having a positive behavior intervention instead of a negative one can positively impact students' behavior. Finally, I also learned that a token economy may not work for everyone. Student K's behavior did not improve, and he probably needs a different form of intervention. This project helped me recognize that every student is different and one intervention will not work for everyone. Sometimes you need to make adjustments.

If I were to continue this intervention, I would switch Student K back to Chart 1 to see if seeing the percent of his on-task behavior would make a difference. I also would try to give the students their rewards separately and earlier in the day. At the end of the day, I was always rushed and didn't get to talk to students about how their day went and what they did well or need to work on. I also would be clearer with the students about how the intervention worked and make sure they understood. I went over it with them when the intervention began, but it was fast and they still had a lot of questions.

If the school year was still in progress, I would continue to use this intervention. I would continue to give the students stars and praise when they were doing well. If I were to implement this in the future, I would complete a preference assessment again to determine what kind of reinforcers motivate the students. I would continue to use the positive praise when giving stars or tokens so students know what they are doing well or why they earned something, and I would

continue to check students out at the end of the day so I could continue to build positive relationships with them.

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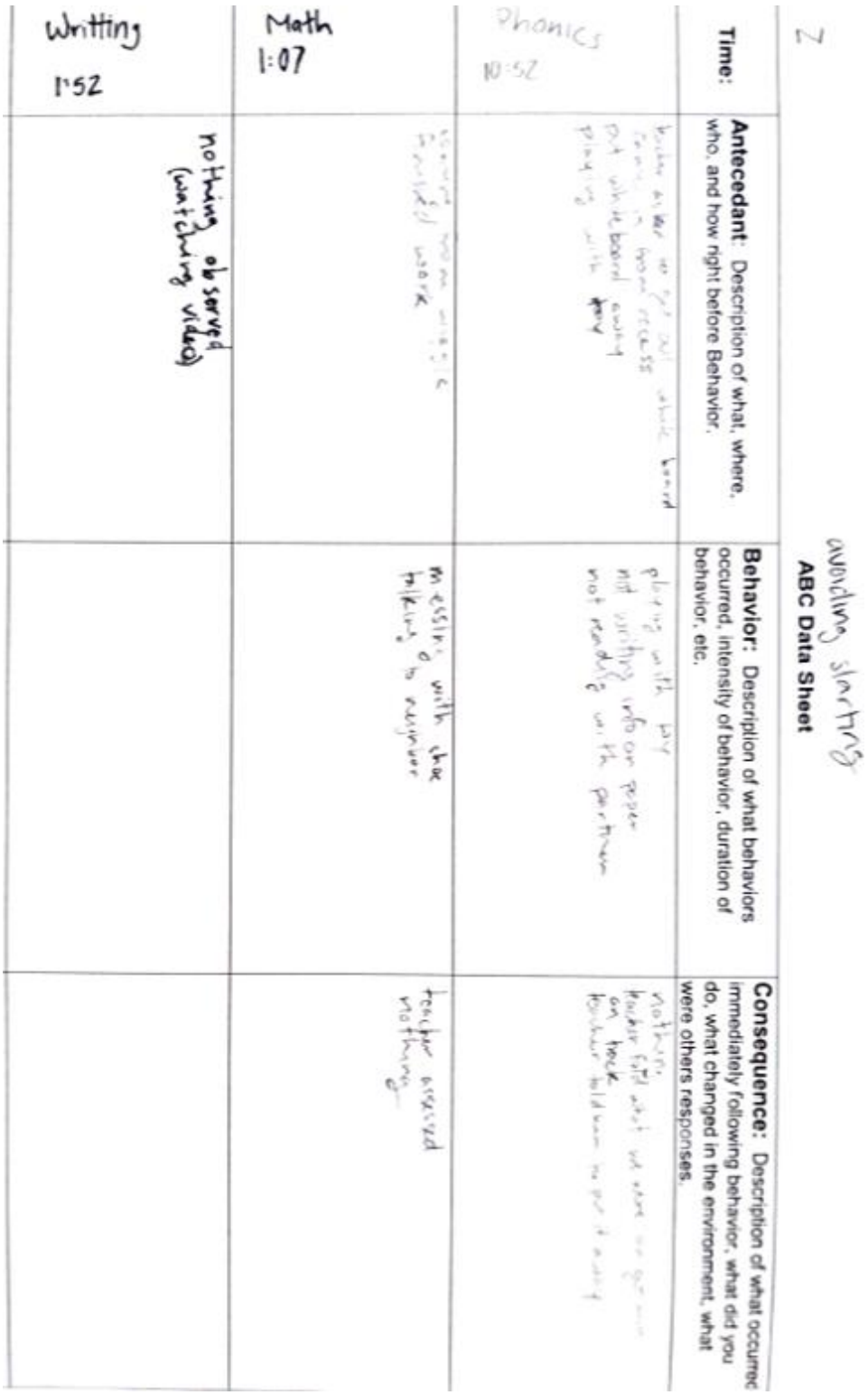
Appendix A



ABC Data Sheet

Time:	Antecedant: Description of what, where, who, and how night before Behavior.	Behavior: Description of what behaviors occurred, intensity of behavior, duration of behavior, etc.	Consequence: Description of what occurred immediately following behavior, what did you do, what changed in the environment, what were others responses.
Phonics 10:52			
Math 1:07			
Writting 1:52	nothing observed (watching video)		