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Simple Behavioral Interventions for Typically Functioning Adolescents with Work Refusal in a Classroom Setting

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A thesis submitted to the faculty of
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Master of Science

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ABSTRACT

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This study was designed to test the effectiveness of 2 different behavioral interventions: a high-probability request sequence and a differential reinforcement of alternative behaviors (DRA) procedure in a classroom setting. The aim of the interventions was to reduce the frequency of task refusal as well as increase the frequency of task compliance in adolescents in a general education setting. The study included 4 adolescents with the same teacher who were reported by their teacher as completing 50% or less of their course work since the beginning of the school year. The teacher implemented the interventions with the participants to test their potential effectiveness. Each student responded differently to the interventions. This was demonstrated using visual analysis of graphs as well as a comparison of descriptive statistics. Some were more compliant when the teacher implemented the high-probability request sequence; others demonstrated greater compliance with the DRA in place. Two participants also demonstrated higher levels of compliance beginning with placement of a camera (and operator) prior to the high-probability request sequence or the DRA implementation. These results indicate that each of these interventions may have the potential to increase compliance with classroom tasks for typically functioning adolescents through the mechanism of increased attention.

Keywords: refusal to work, differential reinforcement, high probability/low probability sequence, behavioral interventions

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Lastly, I want to acknowledge the support and encouragement of my family and friends during the process of pursuing my master's degree and working toward my professional goals. I am so grateful that during the more challenging moments over the years I have had people to lean on. This would not have been possible without them.

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DESCRIPTION OF THESIS STRUCTURE

This thesis, *Simple Behavioral Interventions for Adolescents with Work Refusal in a Classroom Setting*, is written in a hybrid format, combining the pieces of a traditional thesis and the format for journal publication. This thesis meets the requirements for submission to the university. It is written in the format of a journal article in preparation for submission to scientific journals for publication. A full literature review is found in Appendix A.

Appendix B includes a consent form for the parents of the subjects and an assent form for the subjects' participation. Recruitment materials are in Appendix C. The historical survey and the social validity surveys included in this study can be found in Appendix D

Introduction

Task refusal is an issue that every teacher is familiar with to some extent. It is a common problem in both general and special education classrooms (Belfiore, Basile, & Lee, 2008). The problem of task refusal becomes pressing in the classroom, as it makes it difficult for teachers to instruct their students (Belfiore et al., 2008). It has the potential to create long-term problems for students who continually engage in this behavior (Bradley, Doolittle, & Bartolotta, 2008; Hecker, Young, & Caldarella, 2014).

The logical extension of the issue of task refusal is that as students refuse to perform academic tasks, they fall behind in the curriculum, making it more difficult for them to be successful over time. If task refusal behavior is reinforced and not effectively addressed by the time a student reaches adolescence, task refusal can become a behavioral challenge significant enough to jeopardize adult outcomes. Unfortunately, these students generally do not receive intervention until they have failed for a long period of time (Hecker et al., 2014).

Many teachers express a lack of expertise in how to handle these behavioral issues even after going through in-service training (O'Neill & Stephenson, 2014). Given the significant long-term effects of persistent task refusal, it is important that related interventions be researched across all vulnerable populations. This population includes typically functioning adolescents (or adolescents who do not have a disability classification) in general education classrooms.

Task Refusal in the Classroom

Forehand (1977) found that the average student typically complies with teacher requests 60–80% of the time, suggesting that children who comply at a level below 60% are clinically noncompliant and in need of intervention. Different researchers have defined noncompliance by

different standards over the years, but it is generally seen as a failure to perform requests given by individuals in authority (Houlihan & And, 1992).

Task refusal can be split into two distinct categories: (a) individuals who refuse because they do not have the skills to perform a task, and (b) individuals who refuse because they don't want to do a task. Those who work with individuals who engage in task refusal are more effective in achieving cooperation toward task completion if they take the time to discover whether the individual is engaging in task refusal because of a skills deficit or because they simply don't want to perform the task (Gansle, Noell, & Freeland, 2002; Lieberman, 1983). Some of the more effective strategies for this behavior class (task refusal) are discussed below.

Differential Reinforcement

One intervention that has been shown to reduce noncompliant behavior is differential reinforcement of alternative behavior (DRA). Several studies have indicated that offering reinforcement for engaging in desired behaviors can be effective in reducing task refusal in various populations (Gorski, Slifer, Townsend, Kelly-Suttka, & Amari, 2005; Jessel, Ingvarsson, Whipple, & Kirk, 2017; Petscher & Bailey, 2008;).

Jessel et al. (2017) showed the effectiveness of DRA in a 14-year-old boy with autism spectrum disorder who had a history of refusing to perform math assignments. He had been admitted to an outpatient clinic for treatment of his problem behavior after attempts to intervene had failed. The researchers implemented a system in which he earned checkmarks for on-task behavior while working on a math worksheet. If he earned a certain amount of check marks, he would be given access to preferred items such as toys. Using an ABAB reversal design that alternated between baseline measurements and the implementation of the reinforcement

program, Jessel et al. (2017) demonstrated a functional relationship between the implementation of a differential reinforcement program and an increase in on-task behavior.

In another study performed with elementary school aged children, Petscher and Bailey (2008) found that a differential reinforcement of alternative behavior program paired with extinction (withdrawal of reinforcement) was successful in decreasing work refusal in an 8-year-old boy with an emotional disturbance educational classification. Using a functional analysis, Petscher and Bailey found that the subject engaged in task refusal to gain access to objects he wanted to play with. After researchers collected baseline data, the subject could earn 30 seconds of access to a preferred item by performing a task that showed engagement in the class, namely raising his hand. Researchers introduced extinction by not providing the desired objects when he engaged in task refusal and implementing a graduated prompt hierarchy. The experiment demonstrated that task refusal decreased in both the extinction and the differential reinforcement conditions. While this experiment showed that this intervention could be effective for children with emotional disturbance educational classifications, there is still little research indicating if this intervention could be applied as effectively with typically functioning students or adolescents.

High-Probability Request Sequence

High-probability request sequences are also commonly used to increase task compliance. The high-probability request sequence involves presenting a few simple requests that the individual is likely to follow before giving a request that they are less likely to comply with. This intervention has been shown to be effective with several populations in several settings (Lee, Belfiore, Scheeler, Hua, & Smith, 2004; Ray, Skinner, & Watson, 1999; Wehby & Hollahan, 2000).

While the interventions described above have been shown to increase task compliance in specific populations, further research is necessary to ascertain whether they would be an effective intervention for increasing task compliance in adolescents without educational classifications. Most of the studies performed for differential reinforcement, wait-out procedures, and high-probability request sequences have been done with children or individuals with intellectual and other disabilities, although two of the studies above were performed with adolescents. There are very few studies testing the use of this intervention with adults or adolescents without an intellectual disability (Hughes, 2009). The research testing these interventions with individuals who have disabilities or educational classifications is valuable, but it is important to find effective interventions for adolescents without educational classifications as well because task refusal behaviors are not exclusive to students with disabilities.

Purpose of the Current Study

The purpose of this study was to apply the two interventions mentioned above, namely a high-probability request sequence and differential reinforcement, in situations where an adolescent student was engaging in task refusal in the classroom. The high-probability request sequence has been hypothesized to effectively reduce escape-maintained task refusal because it offers the subjects access to more preferred tasks, allowing a temporary escape from less preferred tasks (Lee et al., 2004). Generally, when this intervention is used, the ratio of preferred tasks to less preferred tasks will be higher, allowing students to experience fewer task requests for less preferred tasks. The subject may then come to associate prompts to perform tasks with access to more preferred tasks.

After performing a functional assessment and a preference assessment, rewards were selected for a DRA procedure to address the function of the task refusal as well as the individual

preferences of each student. Both of these interventions are simple, easy to implement, and adaptable to individual needs, which make them ideal for use in general education classrooms where the teachers often have little time to focus on individual intervention.

The high-probability request sequence and DRA procedure were implemented to examine if these interventions could be effective with an adolescent population. The hope was that a solution could be found to this problem that is simple and easy to implement. This is important because many teachers in general education classrooms have little time for complex, time-consuming interventions.

It was hypothesized that implementing a high-probability request sequence or a differential reinforcement of alternative behaviors procedure would decrease the frequency of task refusal and increase the frequency of task compliance in adolescents in a classroom setting.

Research Questions

1. Will a high-probability request sequence be effective in decreasing the frequency of task refusal and increasing the frequency of task compliance in adolescents in a classroom setting?
2. Will a differential reinforcement of alternative behavior procedure be effective in decreasing the frequency of task refusal and increasing the frequency of task compliance in adolescents in a classroom setting?
3. Will the implementation of the above-mentioned procedures be considered effective and worthwhile to the teachers implementing them?
4. Will these procedures be considered helpful and effective to the students with whom they are implemented?

Methods

All methods were approved by the university Institutional Review Board and the school district where the study was performed. Parents gave informed, written consent prior to their adolescent entering the study. Adolescents also gave informed, written assent.

Participants

Each of the participants was a student who had been nominated by his teacher because he was completing 50% or less of his course work since the beginning of the school year (according to teacher reports). This study began with six male eighth-grade students. These students were included because their teacher reported that they were struggling with task refusal more than any of the other students in her classes. Initially we were also looking for students who fit the characteristics of an emotional disturbance classification (Hecker et al., 2014). However, it was difficult to find students who fit these criteria to work with. After struggling to find subjects, students without an emotional disturbance classification were included. One student discontinued after moving to a different school a few weeks into the study. Another student was not included in the study because he was frequently absent and experienced some traumatic events at the time the study began, including the death of a family member. His performance in class during the study was not typical for him because he was so affected by the trauma. His teacher allowed him to sleep during class rather than performing classwork because he was not sleeping at night. Therefore, four male eighth-grade students were included in this study. They were all recruited from a school district in northern Utah with which BYU has a research partnership. Families in this district had a median family income of about $90,000 and were predominantly Caucasian (Census Reporter, 2017). Participants were recruited through teacher referrals.

Names have been changed to protect confidentiality. All participants were reported by their teacher to be fluent in the English language to ensure that this did not affect their level of compliance and become a confounding variable. Their task refusal was found through functional behavior assessment to be a problem related to not wanting to perform the task rather than not having the skills to perform the task (see the Results section), which also would have been a potential confounding variable.

Setting

This study was conducted in an eighth-grade reading classroom in a public school in Salt Lake County. This was not a special education classroom, but students were placed in this particular class by school counselors because of prior low grades in a regular reading class (a Tier 2 (targeted) intervention for students at risk of academic failure within a multi-tiered system of support). The teacher for this class had a special certification for reading and specialized in teaching reading skills. The teacher was well known at the school as a skilled educator. During the course of the study she was voted the school's "Teacher of the Quarter," and she had been named "Teacher of the Year" in a prior year. Subjects were from two of this teacher's reading classes, with each class containing 25–30 students.

Procedures

Questions from the Behavior Assessment Scales for Children (BASC) Structured Developmental History (Parent Rating Scale: Reynolds & Kamphaus, 2015), were used to obtain background information about the participants and to ensure that there were not any indicators of developmental delays in the students' histories. Parents answered these questions via Qualtrics survey. A functional assessment was conducted to develop a hypothesis regarding what the function of the behavior may be and the consequences of maintaining the task refusal behavior.

This functional assessment was performed using the Functional Assessment Interview (O'Neill, 1997) as well as several hours of classroom observation performed by the research team. For all of the students, the predominant function of their classroom refusal was escape.

After these initial assessments, a preference assessment was performed to indicate what type of reinforcers might be motivating to the individuals when the differential reinforcement phase was implemented. The students were given a list of possible items they could earn that they ranked from most to least preferred. This preference assessment was designed to include items such as free time or getting out of an assignment. Many of the items offered as possible reinforcers were designed to serve an escape function, offering participants a functional alternative to task refusal to obtain escape, although other options were given as well, such as small food items. These reinforcers were items that the student was not able to access freely. Any items that the student was able to access freely were not included as potential reinforcers (e.g., sleeping at their desk and sitting quietly).

Teacher preparation. Prior to implementation of the interventions, the teacher was consulted regarding the two behavioral interventions to ensure that the research design was feasible in the classroom. The teacher viewed multiple video modeling examples of the implementation of each of the interventions prior to the beginning of the interventions. The teacher participated in the functional assessment of behavior (through interview), the preference assessment, and the determination of high-probability behaviors for each student prior to the intervention phases.

High-probability request sequence. One of the procedures used to reduce task refusal was an adapted high-probability request sequence, which was implemented by the teacher. Before providing a task with which the student was unlikely to comply, the teacher provided two

requests to the entire class that the student and their classmates would likely follow, or two high-probability requests. These requests came from a menu of requests that the teacher reported her students would be likely to comply with as well as some requests that were improvised in the moment by the teacher. If the student and their classmates complied with both requests, the teacher issued the low-probability request (Cooper, Heron, & Heward, 2007, pp. 492–494). If the student did not comply with any of these requests, the teacher waited 2–10 minutes and then began the sequence again using different high-probability requests. Data on assignment completion were used to see if the students were following through with the requests given by the teacher. A research assistant also recorded participant compliance or non-compliance within 60 seconds of a request based on video recordings of class sessions.

This procedure differed from a typical high-probability request sequence in that the initial presentation of the high-probability and low-probability requests was given to the group as a whole. This adjustment was made to fit the needs of the classroom as the majority of the requests made in this class were given to the entire class. It would have been unnatural, disruptive, and less confidential to give these requests to individual students. The teacher would have been unable to use this intervention in a classroom setting had she been expected to adhere to the typical implementation of the high-probability request sequence.

Differential reinforcement of alternative behavior. A differential reinforcement of alternative behavior (DRA) condition was also implemented in some phases of the study. The student received a preferred reinforcer from a group of items that were previously identified as items that the student would enjoy earning when they demonstrated compliance. The students' top preferences were offered as reinforcers during the DRA phase of the study. Mark (all names have been changed) chose to earn a candy bar, Tom chose to have his lowest grade on an

assignment dropped, Josiah chose 5 minutes of phone time at the end of class, and Ben chose 5 minutes of free computer time at the end of class as their rewards.

Each student also had some specific criteria for earning their reward chosen by the teacher. The teacher chose these criteria based on how much she perceived the individual student was struggling with certain aspects of classroom compliance. Tom was required to get a certain number of answers correct on the assignments he was given. This was done because he was clearly capable of successfully answering the questions correctly but chose not to do the assignments. Mark, Ben, and Josiah were required to stay on task for the majority of the class period. The students were reminded every day (Tom and Mark) or every few days (Josiah and Ben) based on the teacher's perception of how much they were struggling to complete tasks. The teacher checked in at least every 10–20 minutes to ensure that they were on task. Again, data on assignment completion was used to see if the students were following through with the requests given by the teacher, and a research assistant recorded how many times the student did not comply within 60 seconds of a request based on video recordings of class sessions.

Sessions were video recorded and observed by several undergraduate research assistants who were trained by the researcher. The researcher trained them to use the camera and maintain confidentiality as much as possible while observing the participants. The undergraduate research assistants took data on the frequency of the participants' task refusal using event recording methods in 40% of the class sessions during the study (they did not take this data on 100% of the sessions due to time constraints). Data were taken on each session by two different research assistants for each of the sessions and compared for agreement to ensure that accurate data were taken. Agreement was measured for the frequency data using a formula for occurrence or nonoccurrence of the behavior. The following formula was used: (occurrence rate for

refusal)/(occurrence + nonoccurrence). If, through the course of the study, the interobserver agreement was found to be lower than 80%, the initial observer and second observer were retrained on data collection and videos were recoded.

Design

This study used an A-B-C-D-A single-subject design (Cooper et al., 2007, p. 181; see Table 1). The first phase was baseline collection (A), during which only assignment completion data and grade data were collected. During both baseline phases the teacher ran her classroom as she typically did without implementing any special intervention with the participants. After baseline collection, a camera was introduced to the classroom for 2 weeks before the teacher began implementing the interventions (B). This camera was placed in the back corner of the room. At this point the research team began collecting data on immediate compliance data in addition to assignment data. The teacher then began implementing the high-probability request sequence described above (C). Data were collected in this phase for 4 weeks.

This was followed by a phase in which a DRA program was implemented (D), which occurred for 4 weeks. Each of these interventions was in place for only 4 weeks due to time constraints. Then the camera was removed and a second baseline phase occurred (A). This final baseline phase was implemented to make a stronger demonstration of the effect of the interventions in place. Comparing the final baseline phase to the initial baseline phase would show if the data returned to baseline measurements when the interventions were removed. At this point we concluded the study. We had initially intended to include a baseline phase between the high-probability request sequence and the differential reinforcement phase to rule out treatment effects from the previous intervention, but this phase was removed due to time constraints.

Table 1

Sequence of Experimental Phases

Phase	Description
A	Baseline data collection (assignment completion and grades data only)
B	Camera-only
C	High-probability request sequence
D	Differential reinforcement of alternative behaviors
A	Baseline (assignment completion and grades data only)

Note. Assignment completion and grades data were collected for all five phases. Behavioral observation data was also collected, with the exception of the two baseline phases, which necessitated the removal of the camera to reach a true baseline.

Measures

Functional behavior assessment. A functional behavior assessment was completed for each of the participants. The researcher gathered data from teacher interview (O'Neill, 1997) and several hours of classroom observations to determine the antecedents preceding task refusal (i.e., the presentation of the current work assignment for the class period) and the consequences of maintaining the task refusal (i.e., escape from a non-preferred task). Data were also collected about the participants' life away from school in the form of notes from home and teacher correspondence with parents and/or the student. This was done to rule out any events at home that might affect behavior at school.

Task refusal. For the purposes of this study, task refusal was defined as a student refusing to perform academic tasks presented in the classroom. A task refusal was recorded any time the student engaged in any behavior other than the task the teacher presented as well as any time the student sat passively when asked to perform a task. The students were given 60 seconds to comply before task refusal was recorded. Improvement in task refusal rates was observed using two different measures. The first measure was task completion. This was expressed as a percentage of tasks completed. This measurement was taken from the students' grades in the class. An increase in assignments completed and assignments passed demonstrated that the students were performing the assigned tasks. Percentage of assignments passed was also measured to ensure that students maintained the quality of their work as they completed more assignments. A passing assignment grade was considered a C or above.

Task refusal/compliance. The second measure was the rate of task refusal/compliance, meaning how many tasks were refused or complied with within 60 seconds of the request being presented (expressed as a percentage of opportunities to complete tasks). Refusals were counted if the student did not comply with a teacher request within 60 seconds.

Treatment Fidelity

All of the sessions for each participant were video recorded and coded by undergraduate research assistants who were trained by the researcher to monitor treatment fidelity. These research assistants were given a checklist of items that the teacher should do as she implemented the interventions. This included using two high-probability requests for each request during the high-probability request sequence and waiting 2–10 minutes after a refused request to present another request. For the differential reinforcement procedure, the teacher reported what percent of the time she reminded them of the reward and then gave them the reward when they fulfilled

the criteria to earn it. This was included along with the student behavioral data they took for each session. The research assistants recorded the sessions with a video camera then coded the video recordings.

Social Validity

The teacher was interviewed after the study was completed, again via Qualtrics survey. She was asked questions to ascertain if she felt like the interventions were effective as well as how difficult the interventions were to implement in the classroom. The participants also completed a survey after the study was completed to indicate how they felt about the interventions. The results of these interviews demonstrated the social validity of these interventions.

Data Analysis

Completion of assignments before, during, and after the interventions were implemented was measured as a percentage of assignments completed each week via the teacher's electronic grade book. Assignments completed showed if the students were complying with requests given by the teacher to complete work, even if they did not comply immediately. These data are also included to demonstrate whether the interventions influenced grades in the class in addition to any effect the interventions may have had on task compliance. These graphs were analyzed by evaluating the trend, level, and variability of the data paths between phases. The mean percent of assignment completion for each phase was also measured to compare the effect of each intervention to baseline measurements.

Treatment fidelity for the high-probability request sequence was analyzed by using an average percent fidelity for the teacher. Treatment fidelity was impossible to measure through observable data for the DRA because the rewards were often offered and received off camera.

The teacher reminded the students of their rewards quietly before the cameras arrived. This meant that fidelity for this intervention was evaluated through self-report from the teacher. This was done so treatment fidelity could be taken into account when considering the effectiveness of the intervention.

Changes in frequency of task refusal and task compliance between phases were analyzed by comparing the percentage of tasks refused and tasks complied with for each phase. The levels of the percent of tasks refused and tasks complied with were compared between phases. This was done to demonstrate if immediate compliance to tasks improved with intervention. This data was represented in bar graphs (see Figures 5–8) rather than a line graph because requests were given very infrequently (once or twice a class period on average), making it difficult to include enough data points for visual analysis.

Social validity responses for the students were analyzed by comparing the percentage of yes answers to no answers. Social validity responses for the teacher are listed in a table (Table 2), as only one teacher participated in this study. The results of the functional assessment for each participant are described in the results as well.

Results

This study was designed to test the effectiveness of two interventions to address task refusal in adolescents, namely a high-probability request sequence and a differential reinforcement of alternative behavior procedure. The study was also designed to test how acceptable these interventions are for the target population and their teachers. These questions were investigated using grades data, observed compliance data, and data from social validity surveys. In this section, we will review these data as well as data regarding functions of the behavior and treatment fidelity.

Functional Behavior Assessment

Mark often refused to participate in classwork and avoided performing tasks by reading a book. He sometimes complied with tasks for a moment, but then he would take out his book and read instead. His teacher described him as "quietly defiant." The researchers hypothesized that his task refusal was maintained by escape from classroom tasks and access to other activities, namely reading a book he brought to class. This theory was ascertained by observing him refuse assignments after they were given and take out his book to read. This behavior was performed repeatedly as he gained access to escape and alternative activities. Mark was the only participant included in this study who was clearly gaining access to another item or activity when he refused to perform tasks. Mark attended 98% of the class sessions during the study.

Tom told his teacher at the beginning of the year that he does not enjoy being around people. He had been refusing to perform work but seemed to be doing a little better (according to teacher reports) since his teacher moved him to the back of the room in a desk without anyone next to him. He was included in this study because at the time students were being recruited for this study Tom still often refused to perform classwork. Tom's classroom refusal was likely maintained by escape from classwork. Escape was likely the function of this behavior because Tom continued to refuse classroom tasks as he was reinforced by escape. Tom attended 98% of the class sessions during the study.

Josiah's teacher suspected that he refused classwork because he did not find it interesting. She said that he was willing to do more difficult tasks, but he was often unwilling to do the more typical tasks he was asked to do in class. Otherwise he seemed well adjusted according to classroom observations, and he seemed to get along with his fellow students. The researchers hypothesized that escape was the function of Josiah's task refusal because he repeatedly refused

classwork, as he was able to escape the tasks assigned. Josiah attended 91% of the class sessions during the study.

Ben was a very calm, agreeable student who was nevertheless disengaged and refused work frequently early on in the school year. Ben also presented as an otherwise well-adjusted young man. He also did well socializing with his classmates. The function of Ben's task refusal was also assumed to be escape after observing him in the classroom. As with the other participants, Ben repeatedly refused to perform classroom tasks, as he was able to escape the assignments he was asked to perform. Ben attended 84% of the class sessions during the study.

Treatment Fidelity

When giving requests during the high-probability request sequence phase of the study, the high-probability request sequence was only used 50% of the time the teacher wanted to give a request. Implementation of the DRA varied for each student. The teacher changed the amount of times she reminded each student of the reward they were earning based on how much she felt that they were struggling to complete coursework. For Tom and Mark, who struggled more than the other students included in this study, she reminded them on average once a day. Josiah and Ben were reminded about once a week. They were given the reward once a week.

Effectiveness of High-Probability Request Sequence and DRA

When the camera was placed in the classroom, the level of assignments turned in by Tom, Mark, and Ben increased from baseline levels (which were 81% for Tom, 50% for Mark, and 52% for Ben at baseline; see Figures 1-4) to 100% for Tom and Ben and 63% for Mark, although the change for Tom was fairly small. The percent of assignments turned in by Josiah decreased from the baseline phase (64%) when the camera was put in place (50%).

The percentage of assignments turned in for Tom, Ben, Mark, and Josiah increased during the initial implementation of the high-probability request sequence from baseline measurements (increasing to 94% for Tom, 91% for Ben, 81% for Mark, and 88% for Josiah), although for Ben and Tom they decreased from the level during the camera-only phase (which was 100%). Josiah, Mark, and Tom's assignments turned in all trended down as the high-probability request sequence continued.

The percentage of assignments turned in by Tom and Josiah were both higher during the DRA (100% for both) than they were during baseline measurements or the high-probability request sequence (81% and 94% for Tom, 64% and 88% for Josiah). Again, these changes were small for Tom. The level of Ben's assignments turned in was higher during the DRA (83%) than it was during the initial baseline measurements (53%), but lower than in the camera-only and high-probability request sequence phases. The percentage of assignments Mark turned in was lower during the DRA phase (55%) than it was in the camera-only phase and high-probability request sequence, but slightly higher than initial baseline measurements (50%).

During the last baseline phase, the percentage of assignments turned in by Josiah and Tom decreased (83% for Josiah and 57% for Tom). The percentage of assignments turned in by Mark was lower in the final baseline phase than during the initial baseline, camera-only, and high-probability request sequence phases, although it was at the same level as the DRA phase (57%). The level of Ben's assignments turned in during the return to baseline phase was 100%. The percentage of assignments turned in slowly trended down for Tom and Josiah throughout the final baseline phase.

The percentage of assignments passed followed the same patterns as the percentage of assignments turned in for the majority of the participants. The only exception was Ben. The

percentage of assignments passed for Ben followed the same patterns as his assignments turned in until the DRA, at which point they decreased. The percentage of assignments passed for Ben maintained this low level during the return to baseline measurements.

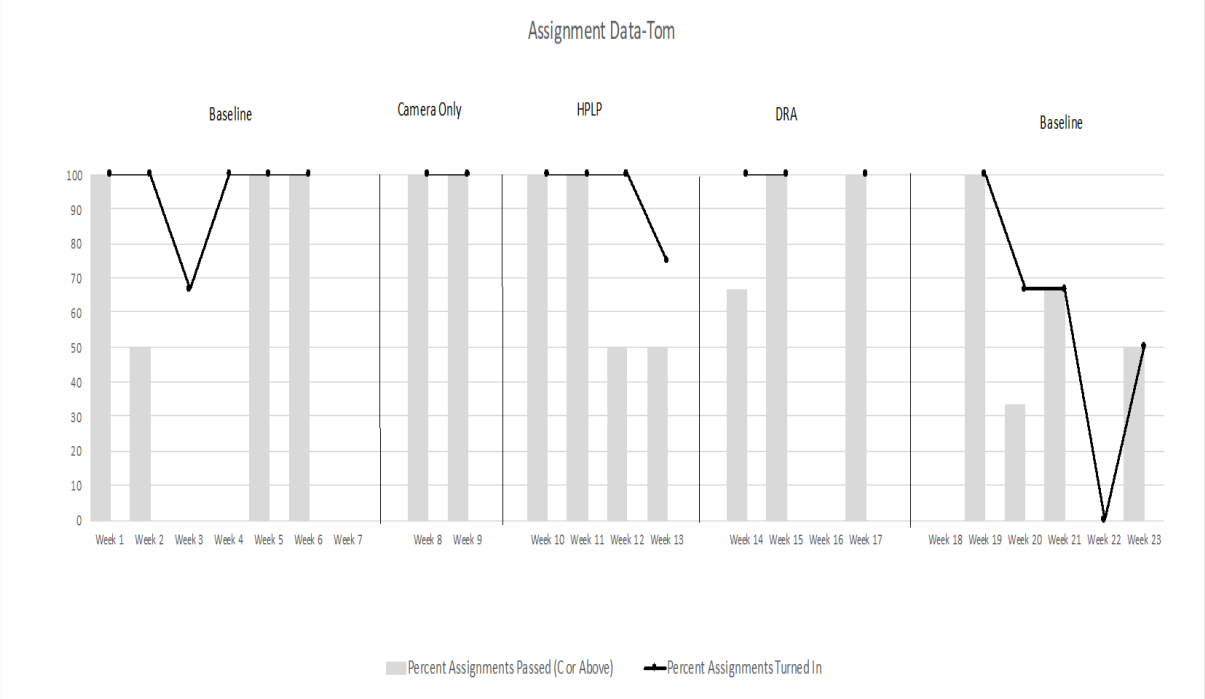

Figure 1. Assignment data—Tom. No assignments were given during weeks 7, 16, and 18.

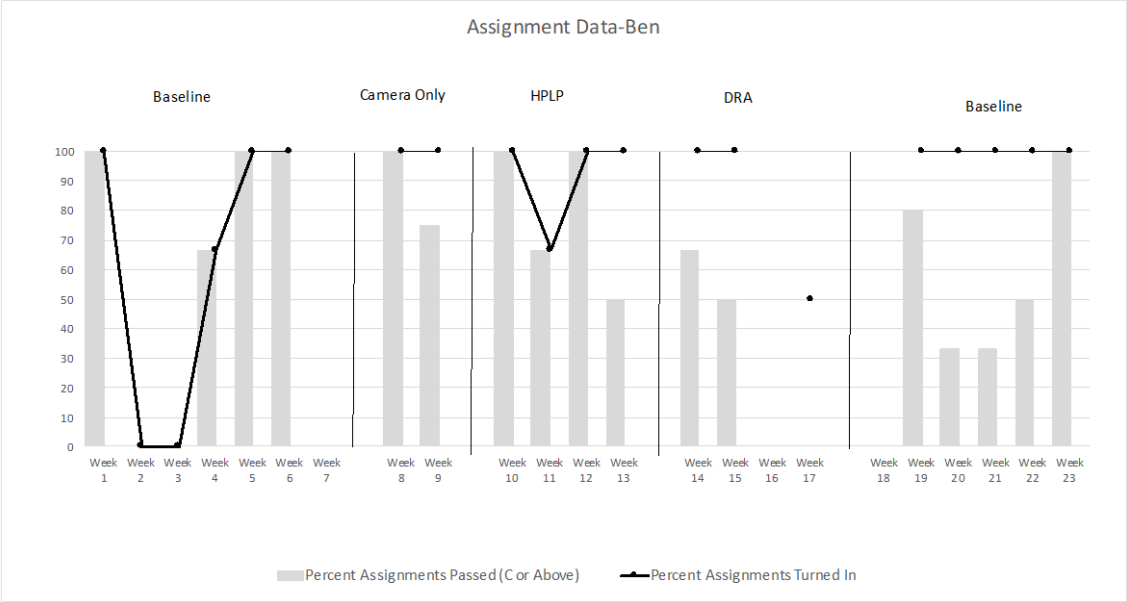

Figure 2. Assignment data—Ben. No assignments were given during weeks 7, 16, and 18.

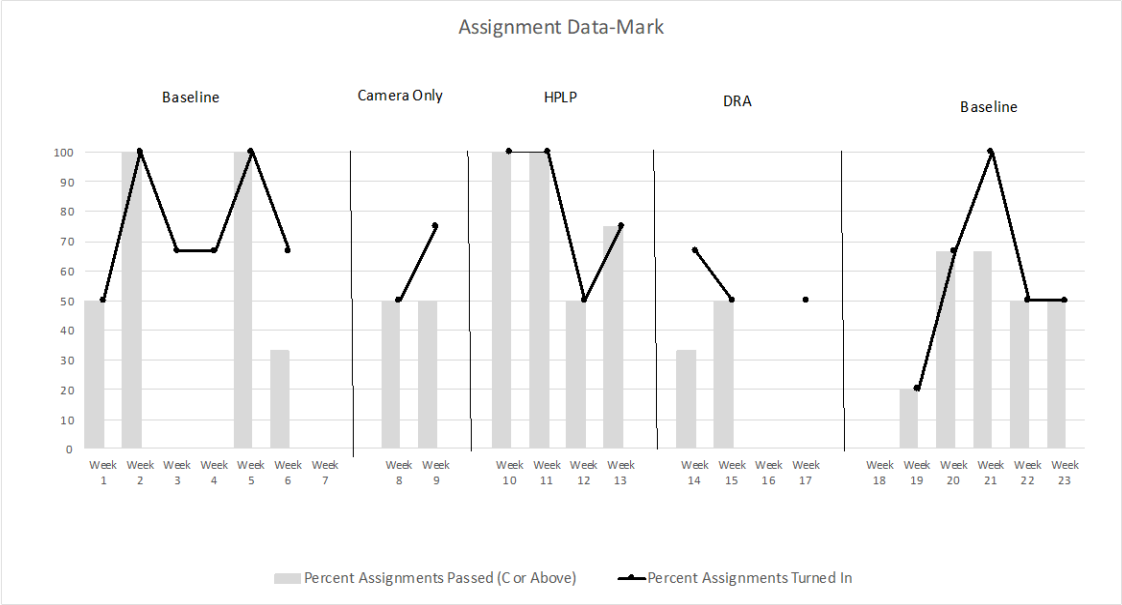

Figure 3. Assignment data—Mark. No assignments were given during weeks 7, 16, and 18.

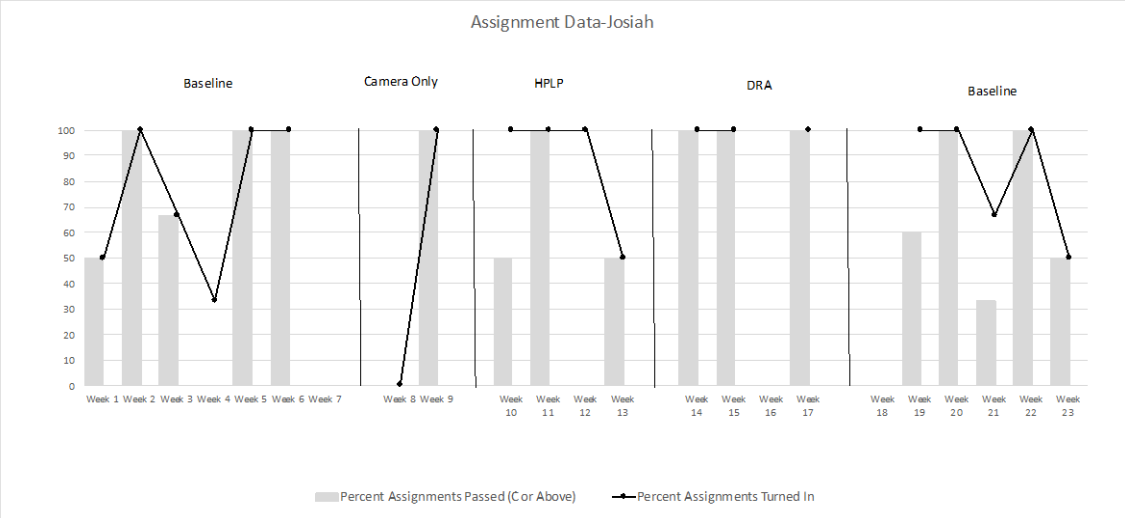

Figure 4. Assignment data—Josiah. No assignments were given during weeks 7, 16, and 18.

Compliance With Requests/Task Refusals

Immediate compliance (compliance within 60 seconds of the request being given) was measured during the camera-only phase and during each intervention phase (see Figures 5-8). All of the students demonstrated less immediate compliance during the high-probability request sequence than they did during camera-only measurements. Immediate compliance increased for almost all of the subjects during the DRA phase.

Perspectives on Effectiveness and Usefulness of Interventions

Student perspectives. Students were asked several questions, including if it was easier to follow instructions with both interventions, if the students wanted the teacher to continue using either intervention, and if the students would suggest that either intervention be used with other students (see Figure 9). Data taken from the social validity survey demonstrated that the students answered yes to these questions the majority of the time. This indicates that overall the students agreed with the implementation of these interventions.

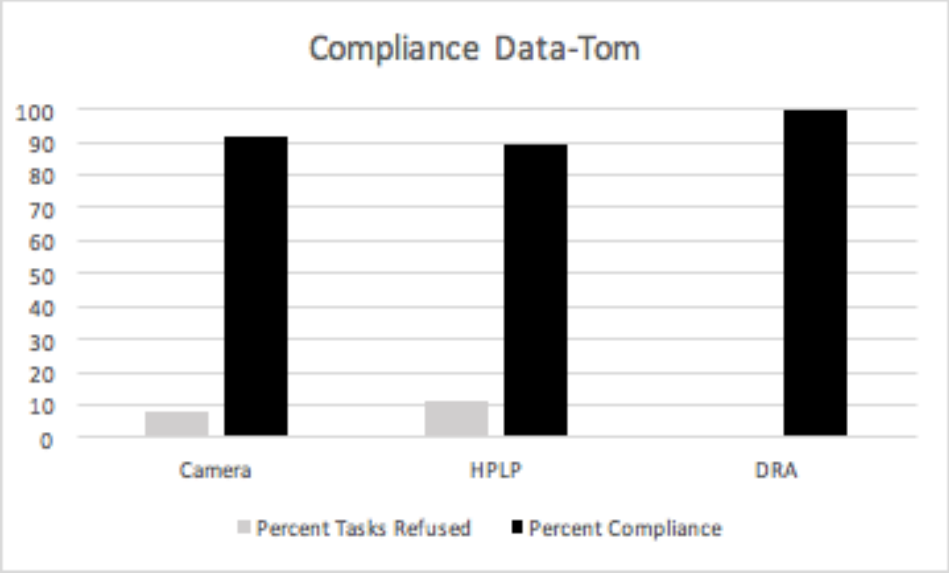

Figure 5. Compliance data—Tom

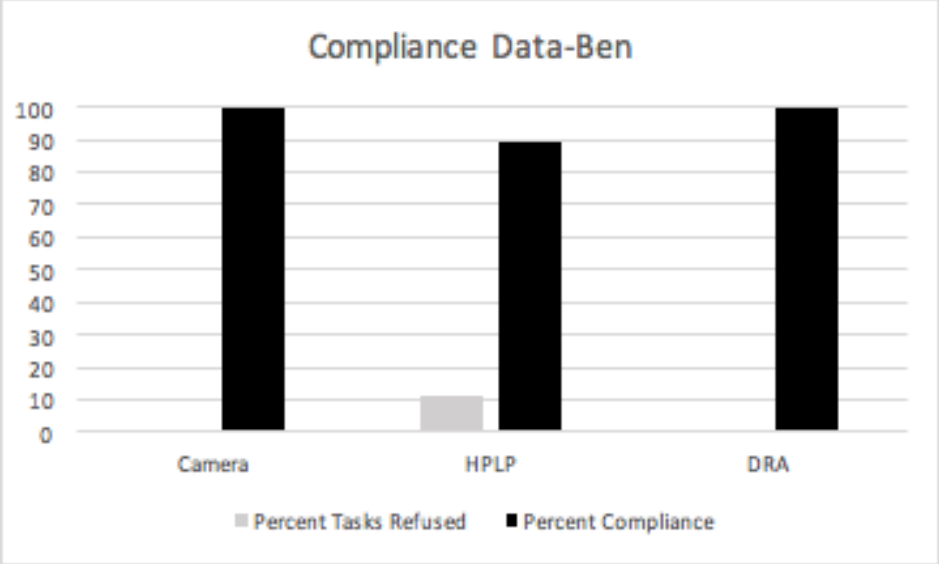

Figure 6. Compliance data—Ben

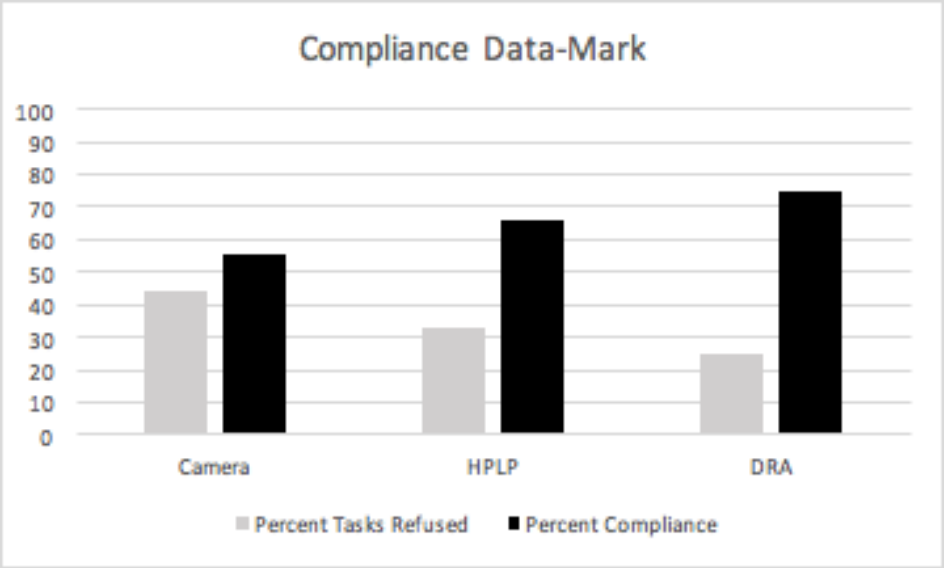

Figure 7. Compliance data—Mark

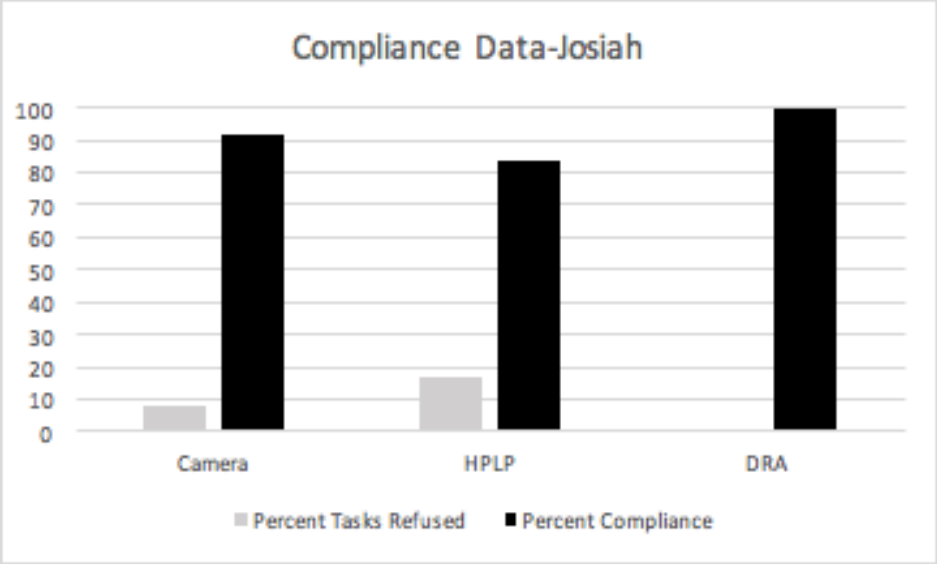

Figure 8. Compliance data—Josiah

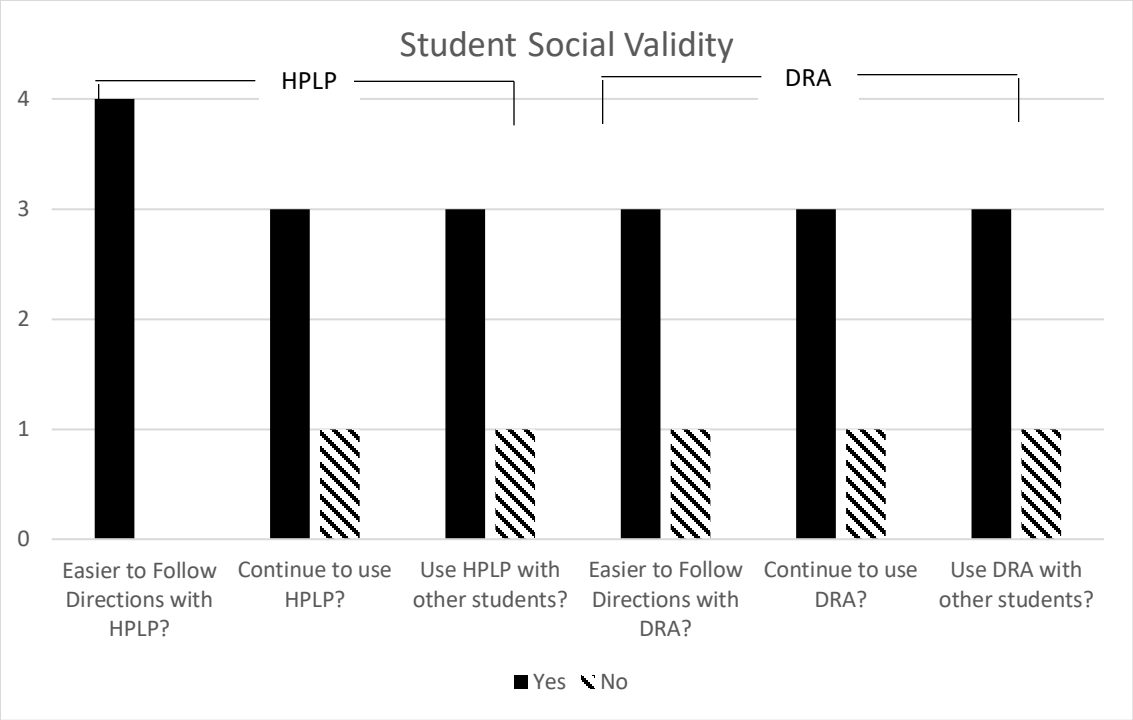

Figure 9. Student social validity survey

Teacher perspective. Teacher data was challenging to represent because of the variety of questions asked (see Table 2). When asked about the high-probability request sequence and the DRA, the teacher said that both interventions were somewhat acceptable. She said that both interventions required a moderate amount of effort to implement. She expressed that both interventions were somewhat reasonable to implement and that she would only be slightly willing to suggest to other teachers that they use these interventions in their classroom.

Table 2

Teacher Social Validity Survey

Question	Response	
Compared to other students you teach, how significant is the task refusal of the students that were included in this study?	Somewhat above average	
	HPLP	DRA
How clear is your understanding of this intervention?	Extremely clear	Extremely clear
How acceptable did you find this intervention for the students you worked with?	Somewhat acceptable	Somewhat acceptable
How much effort was required for you to implement this intervention in your classroom?	A moderate amount	A moderate amount
To what extent do you think there might be disadvantages to implementing this intervention?	A little	A moderate amount
Given the amount of effort invested in this intervention, how reasonable do you find it to be?	Somewhat reasonable	Somewhat reasonable
Compared to other students, how severe was the task refusal before implementing this intervention?	Somewhat above average	Somewhat above average
Compared to other students, how severe was the task refusal after implementing this intervention?	Somewhat above average	Somewhat above average
How effective was this intervention at reducing task refusal?	Slightly effective	Moderately effective
How disruptive was this intervention to your classroom routine?	Slightly disruptive	Not disruptive at all
How much did you enjoy implementing this intervention with these students?	A little	A little
How willing would you be to recommend the intervention to others who teach students who engage in task refusal?	Slightly willing	Slightly willing

Discussion

Task Refusal and Intervention

Task refusal is a problem that is commonly faced in the classroom (Belfiore et al., 2008). Several simple behavioral interventions, including the high-probability request sequence and DRA, are frequently used to address task refusal in classroom settings (Cosden, Gannon, & Haring, 1995; Doyle, Jenson, Clark, & Gates, 1999; Gorski et al., 2005; Jessel et al., 2017; Lee et al., 2004; Petscher & Bailey, 2008; Ray et al., 1999; Ward, Parker, & Perdikaris, 2017; Wehby & Hollahan, 2000). Throughout the literature these interventions have been more commonly tested with younger children or individuals with developmental disabilities. While these interventions have been shown to be effective with these specific populations, there is not a literature base to investigate interventions for task refusal behavior in adolescents without disabilities in general education classrooms.

Findings

Effectiveness of high-probability request sequence. The assignments/grades data for all of the participants indicated that they all performed better during the high-probability request sequence phase. The mean percentage of assignments turned in increased for each of them, although the change was greater for Mark, Ben, and Josiah than it was for Tom. These students all completed more assignments with the intervention in place, which likely demonstrates greater compliance. Many of these students seemed to enjoy interactions with their teacher (according to observations), suggesting that the attention provided by the high-probability request sequence and by being included in a study could make a positive difference for them. We hypothesized that the extra attention received from their teacher and from others when they were included in the study had an effect on their behavior when given assignments. While this does not address

the hypothesized function of escape, attention may have been valuable enough to the students to reinforce compliance to tasks given.

The compliance data for almost all of the subjects showed that overall the students followed *fewer* directions when the high-probability request sequence was in place than when no interventions were in place at all. This was an interesting juxtaposition from the grades data, which showed that three of the four students completed more assignments with more correct answers when the high-probability request sequence was in place. The combination of these two pieces of data suggests that while these students demonstrated less immediate compliance to teacher requests when the high-probability request sequence was in place, they still complied with more assignments given in class during this phase than they did during baseline.

Effectiveness of differential reinforcement of alternative behavior. The grade data for all but one of the participants showed improvement in the DRA phase from baseline measurements. This may demonstrate that offering a reward motivated these students to comply more with assignments given in class. Mark's assignment completion and grades began following a downward trend when the DRA was put in place, however. This trend was interesting because Mark's teacher reported that Mark asked her regularly about the reward. He seemed interested in the reward, but it did not improve his compliance or assignment completion.

We also saw an increase in overall immediate compliance to classroom requests for all but one of the students (Mark) when this intervention was put in place. This was interesting because not all of the students' assignment completion rates improved when this intervention was put in place. However, this still demonstrates that this intervention improved classroom compliance for most of the students included in this study.

The differences in response for each of these students in the different phases of this study demonstrates that both of these interventions have the potential to be effective with this population but that individual differences need to be taken into consideration when implementing them. These individual differences are discussed below. They include function of behavior and individual environmental factors.

Environmental factors. One of the participants, Tom, was in close proximity to the research assistant with the camera throughout the study. Changes in his behavior are seen prior to the intervention phase and are much less variable, which we believe may be in response to the camera's proximity. We have no data on Tom's compliance when the camera was withdrawn from the classroom, but his assignments/grades data reverted to below early baseline levels immediately. It is possible that Tom and maybe some of the other participants were responding to attention as an environmental factor in addition to the techniques in each of the interventions studied. Because we could not collect behavioral data without being present in the room, we had no way to verify this directly, but indirect evidence seems to support this hypothesis.

Acceptability of interventions for participants and teacher. When asked if they felt that the high-probability request sequence helped them follow directions more in the classroom, 100% of the participants said yes. When asked the same question about the DRA, all but one of the participants said yes. This indicates that they felt that these interventions fulfilled their purpose of increasing compliance. Of the participants, 80% said that they would like the teacher to continue using these interventions in the classroom and that they would suggest that teachers use these interventions with other students. Anecdotally, several of the students expressed excitement at the prospect of earning a reward for classroom compliance. Overall these

interventions had strong social validity for the students involved, showing that the target population finds these interventions helpful and effective.

While the social validity of this intervention was high for the students involved, social validity was not as high for the teacher involved in the study. As is demonstrated in the teacher survey included in the results (see Table 2), the teacher found these interventions moderately reasonable to implement but said that she would only be slightly willing to suggest them to another teacher. The teacher also did not perceive the high-probability request sequence to be effective, although she did believe that the DRA was moderately effective with her students. This moderate-to-low social validity with the teacher is an important factor to consider for generalization.

Incidental findings. It was not the intention of the research team to include a phase in this study that compared the presence of a camera to baseline measurements. The intention, rather, was to acclimate the participants to the presence of the camera. This presented an interesting opportunity, however, to evaluate the use of a camera as an intervention for task refusal. While two of the students' behavior did not improve when the camera was put in place, Tom and Ben responded well (in terms of assignments completed and passed) to the presence of a camera and operator in the classroom. Both of these participants' compliance with assigned classwork increased when the camera was put in place prior to implementation of other interventions.

Unfortunately, the camera was only in place without either of the interventions for 2 weeks, which is a limitation of these findings. However, these preliminary data indicate that using a camera or using some sort of procedure that increases the amount of attention (via observation) in place for students who engage in task refusal could be an effective way to

improve classroom task compliance. During the functional assessment process, it became clear that Tom responded well to attention from the teacher, which could be a reason why he was more compliant with classroom tasks when he was observed more closely. Anecdotally, Tom's teacher indicated to the research team that Tom became more engaged in the classroom immediately after she talked to him about being included in this study. Again, this could be an indication that being observed more closely or receiving extra attention improved Tom's behavior.

Limitations

There were several constraints in the design and execution of this study that limited the amount of generalization of our results to the broader population of typically functioning adolescents and the interpretability of the data. Using only one teacher in this study was one of these limitations. It is difficult to say if another teacher using these interventions would have produced the same results. However, the participants were spread across two of the teacher's classes. This demonstrates that similar results were demonstrated in two classrooms with different environmental variables, including different class sizes and different classmates.

Another possible limitation in the design of this study is the use of the high-probability request sequence as a group intervention. The high-probability request sequence is typically used with individuals; however, individual instruction was rarely provided in the classroom in which this study occurred. Because of the structure of the classroom in which this study was performed, the high-probability request sequence was used when the teacher gave requests for the entire group. Had the high-probability request sequence been used only with individual instruction, as it was originally intended to be used, it might have been a more successful intervention for increasing task compliance in this population. This intervention was also only

used for 50% of the requests given. This lack of treatment fidelity possibly could have limited the effectiveness of this intervention as well.

There were also limitations in the execution of the typical withdrawal design. Typically, in a single-subject research study the data is monitored throughout the study and changes to the design are made accordingly (Horner et al., 2005). Unfortunately, due to the nature of research conducted within classroom settings, the constraints of the school calendar made changes to the design prohibitive. These time constraints also led to the lack of a baseline phase between the implementation of the high-probability request sequence and the DRA, which would have also led to a stronger demonstration of effect (Cooper et al., 2007, p. 181). These limitations impede the strength of the conclusions of this study.

Future Research

It is important that more research be done to address task refusal in typically functioning adolescents in general education classrooms. As was stated in the limitations of this study, an important direction of future research would be to test the interventions included in this study with this population again to demonstrate the validity of these results. As the effectiveness or ineffectiveness of these interventions is demonstrated across samples, it will give practitioners more direction as they look for simple interventions to address noncompliant behavior in the classroom. As these interventions are tested with this population, it would be helpful to implement the high-probability request sequence with individuals rather than in group instructions. As was stated above, this intervention was intended for individual instruction.

Another useful line of research would be to test other very simple interventions intended for task refusal with this population. There are some interventions that are intended to address this problem with adolescents in a general education classroom setting (Cosden et al., 1995;

Doyle et al., 1999), but these interventions can be complicated and effortful to implement. Many teachers already feel overwhelmed with the amount of work they are required to perform, making it difficult to implement time consuming interventions (O'Neill & Stephenson, 2014).

To explore the possibility that environmental attention (e.g., a person with a camera) was factor in student improvement, a study could be designed to test that hypothesis. It would require a remote camera to monitor behavior while the visible camera was not in the room, however. Such a study would not require teachers to implement anything outside of their usual routines and interactions, though it would be interesting to also study teacher behaviors.

This population has been under researched, and it would also be helpful for future researchers to develop new ideas to address task refusal in this population. As has been previously stated, teachers often feel that they do not have the training necessary to address behavior issues in general education classrooms (O'Neill & Stephenson, 2014). They would likely benefit from more direction on how to intervene when typically functioning adolescents engage in task refusal.

Implications for Practitioners

Each of these students responded very individually to the interventions put in place. This is a relevant finding because it demonstrates the importance of considering individual differences when choosing which interventions to use with students. The participants in this study responded differently, perhaps based on factors like their desire for attention and their desire to earn the rewards offered. For instance, Tom seemed to respond to the camera being put in place as well as a reward being offered. However, Josiah's data may suggest that he responded more to the high-probability request sequence and the DRA. These students were treated differently and responded differently to intervention or environmental changes.

One way for practitioners to gain an understanding of the individual differences that may affect which interventions will help their students is to perform a thorough functional assessment (O'Neill, 1997). This type of assessment could include a preference assessment to gain a greater understanding of what might motivate the student. The information gained from a functional assessment may give the practitioner valuable information that will help them select which interventions they should use to address task refusal in the classroom. A preference assessment can help practitioners make good choices regarding which rewards to offer when trying to motivate students to perform classroom tasks. Performing a preference assessment in this study allowed the teacher to offer rewards that were more motivating for the majority of the students involved. We also may have seen more success with the interventions put in place if we had more strongly considered how the interventions addressed the function of the behavior. For instance, offering rewards that address the function of escape more directly (such as getting out of their next class assignment) may have been more effective.

General conditions to which the students are exposed should also be considered when performing a functional assessment or selecting interventions to put in place. Certain environmental factors can make these interventions more valuable to the students. Several of the students included in this study responded well to the added attention of being observed and included in a study. Often students who engage in task refusal receive a great deal of negative attention from the adults in their lives in the form of reprimands, which could likely create a sense of deprivation when it comes to more positive attention from adults. Both of these interventions give the students involved the opportunity to have positive interactions with adults, which could be more meaningful to them if they are deprived of this kind of attention elsewhere. Providing opportunities to receive positive attention, whether through the interventions tested in

this study or through other means, may lead to improvements in classroom compliance and overall behavior.

Conclusions

Despite the limitations listed above, this study provides important findings about the possible effectiveness of a high-probability request sequence and a DRA with typically functioning adolescents who engage in task refusal in the classroom. There was data to support that each intervention may have been effective at reducing task refusal with some of the participants. The differences in the response of each student for each intervention demonstrates that while these interventions have the potential to effectively address task refusal in this population, practitioners must take into account individual differences before implementing them. This means that practitioners need to assess their students to gain information about what motivates the student and then make decisions about intervention based on their results. If a student is motivated by a greater amount of attention from adults, a teacher can do simple things in their classroom to provide more attention throughout the class period. If the student exhibits problem behavior with the intent to get out of performing tasks, the student can be offered opportunities to escape smaller amounts of classwork later by offering access to activities that interest them more or by having a lowest grade dropped.

While this study presents useful findings, further research is necessary to demonstrate the effectiveness of these interventions with this population. Future research should also be performed to discover which individual characteristics indicate that these interventions can be effective with specific students. As this research is performed, practitioners will gain valuable information about how to address this difficult problem with adolescents.

References

Belfiore, P. J., Basile, S. P., & Lee, D. L. (2008). Using a high probability command sequence to increase classroom compliance: The role of behavioral momentum. *Journal of Behavioral Education, 17*(2), 160–171. https://doi.org/10.1007/s10864-007-9054-x

Bradley, R., Doolittle, J., & Bartolotta, R. (2008). Building on the data and adding to the discussion: The experiences and outcomes of students with emotional disturbance. *Journal of Behavioral Education, 17*(1), 4–23. https://doi.org/10.1007/s10864-007-9058-6

Census Reporter. (2017). Jordan School District, UT. *Census Reporter*. Retrieved from https://censusreporter.org/profiles/97000US4900420-jordan-school-district-ut/

Cooper, J., Heron, T., & Heward, W. (2007). *Applied behavior analysis (2nd ed.).* Upper Saddle River, NJ: Pearson.

Cosden, M., Gannon, C., & Haring, T. G. (1995). Teacher-control versus student-control over choice of task and reinforcement for students with severe behavior problems. *Journal of Behavioral Education, 5*(1), 11–27.

Doyle, P. D., Jenson, W. R., Clark, E., & Gates, G. (1999). Free-time and dots as negative reinforcement to improve academic completion and accuracy for mildly disabled students. *Proven Practice, 2*, 10-15.

Forehand, R. L. (1977). Child noncompliance to parent commands: Behavioral analysis and treatment. *Progress in Behavior Modification, 5*, 111–147.

Gansle, K. A., Noell, G. H., & Freeland, J. T. (2002). Can't Jane read or won't Jane read? An analysis of pre-reading skills designed to differentiate skill deficits from performance deficits. *The Behavior Analyst Today, 3*(2), 161–165. https://doi.org/10.1037/h0099976

Gorski, J. A., Slifer, K. J., Townsend, V., Kelly-Suttka, J., & Amari, A. (2005). Behavioural treatment of non-compliance in adolescents with newly acquired spinal cord injuries. *Pediatric Rehabilitation, 8*(3), 187–198. https://doi.org/10.1080/13638490400021438

Hecker, B., Young, E. L., & Caldarella, P. (2014). Teacher perspectives on behaviors of middle and junior high school students at risk for emotional and behavioral disorders. *American Secondary Education, 42*(2), 20–32.

Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children*, *71*(2), 165-179. https://doi.org/10.1177/001440290507100203

Houlihan, D., & And, O. (1992). A review of behavioral conceptualizations and treatments of child noncompliance. *Education and Treatment of Children, 15*(1), 56–77.

Hughes, J. (2009). A pilot study of naturally occurring high-probability request sequences in hostage negotiations. *Journal of Applied Behavior Analysis, 42*(2), 491–496.

Jessel, J., Ingvarsson, E. T., Whipple, R., & Kirk, H. (2017). Increasing on-task behavior of an adolescent with autism using momentary differential reinforcement. *Behavioral Interventions, 32*(3), 248–254. https://doi.org/10.1002/bin.1480

Lee, D. L., Belfoire, P. J., Scheeler, M. C., Hua, Y., & Smith, R. (2004). Behavioral momentum in academics: Using embedded high-p sequences to increase academic productivity. *Psychology in the Schools, 41*(7), 789–801.

Lieberman, L. M. (1983). Can't vs. won't: The razor's edge. *Journal of Learning Disabilities, 16*(8), 502. https://doi.org/10.1177/002221948301600817

O'Neill, R. E. (1997). *Functional assessment and program development for problem behavior: A practical handbook*. Pacific Grove, CA: Brooks/Cole Pub.

O'Neill, S. C., & Stephenson, J. (2014). Evidence based classroom and behaviour management content in Australian pre-service primary teachers' coursework: Wherefore art thou? *Australian Journal of Teacher Education, 39*(4). https://doi.org/10.14221/ajte.2014v39n4.4

Petscher, E. S., & Bailey, J. S. (2008). Comparing main and collateral effects of extinction and differential reinforcement of alternative behavior. *Behavior Modification, 32*(4), 468–488. https://doi.org/10.1177/0145445507309032

Ray, K. P., Skinner, C. H., & Watson, T. S. (1999). Transferring stimulus control via momentum to increase compliance in a student with autism: A demonstration of collaborative consultation. *School Psychology Review, 28*(4), 622-628.

Reynolds, C. R., & Kamphaus, R. W. (2015). *BASC3: Behavior assessment system for children: Manual.* Bloomington, MN: PsychCorp.

Ward, S., Parker, A., & Perdikaris, A. (2017). Task as reinforcer: A reactive alternative to traditional forms of escape extinction. *Behavior Analysis in Practice, 10*(1), 22-34. https://doi.org/10.1007/s4067-016-0139-7

Wehby, J. H., & Hollahan, M. S. (2000). Effects of high-probability requests on the latency to initiate academic tasks. *Journal of Applied Behavioral Analysis, 33*(2), 259–262. https://doi.org/10.1901/jaba.2000.33-25

APPENDIX A

Review of Literature

Task refusal is an issue that every teacher is familiar with to some extent. It's a common problem in both general and special education classrooms (Belfiore, Basile, & Lee, 2008). This problem becomes pressing in the classroom as it makes it difficult for teachers to instruct their students (Belfiore et al., 2008). There is the potential for long-term problems for students who frequently engage in this behavior.

The logical conclusion when considering these issues is that as students refuse to perform academic tasks, they fall behind in the curriculum, making it more difficult for them to be successful over time. If task refusal is reinforced and not effectively addressed by the time a student reaches adolescence, task refusal can become a behavioral challenge significant enough to jeopardize adult outcomes. Unfortunately, these students generally do not receive intervention until they have failed for a long period of time (Hecker, Young, & Caldarella, 2014).

Many teachers express a lack of expertise in how to handle these behavioral issues even after going through in-service training (O'Neill & Stephenson, 2014). It is important that interventions are researched to deal with these issues. If teachers are unable to address this behavior with students, those students are likely to miss out on important learning opportunities, which may affect them into adulthood.

Task Refusal in the Classroom

Forehand (1977) found that the average student typically complies with teacher requests 60–80% of the time. This suggests that children that comply at a level below 60% are clinically noncompliant and in need of intervention. Different researchers have defined noncompliance by

different standards over the years, but it is generally seen as a failure to perform requests given by individuals in authority (Houlihan & And, 1992).

Task refusal can be split into two distinct categories: individuals who refuse because they do not have the skills to perform a task and individuals who refuse because they don't want to do a task. Those who work with individuals who engage in task refusal are more effective if they take the time to discover whether the individual is engaging in task refusal because of a skills deficit or because they simply don't want to perform the task (performance deficit; Gansle, Noell, & Freeland, 2002; Lieberman, 1983). This can be referred to as a "can't versus won't" problem (Lieberman, 1983). For students who refuse to perform a task because they *can't* do it, task refusal can be remedied by teaching the student skills he or she lacks. When students engage in task refusal despite having the skills necessary to perform the task, or because they *won't* do it, behavior strategies can be implemented to decrease the frequency of task refusal. Some of the more effective strategies for this behavior class (task refusal) are discussed below.

Differential Reinforcement

One intervention that has been shown to reduce noncompliant behavior is differential reinforcement of alternative behavior (DRA). This intervention is commonly used in classroom settings. Several studies have indicated that offering reinforcement for engaging in desired behaviors can be effective in reducing task refusal in various populations (Gorski, Slifer, Townsend, Kelly-Suttka, & Amari, 2005; Jessel, Ingvarsson, Whipple, & Kirk, 2017; Petscher & Bailey, 2008).

Jessel et al. (2017) showed the effectiveness of DRA in a 14-year-old boy with autism spectrum disorder (ASD) who had a history of refusing to perform math assignments. He had been admitted to an outpatient clinic for treatment of his problem behavior after attempts to

intervene had failed. The researchers implemented a system in which he earned checkmarks for on-task behavior while working on a math worksheet. If he earned a certain amount of check marks, he would be given access to preferred items such as toys. Using an ABAB reversal design that alternated between baseline measurements and the implementation of the reinforcement program, Jessel et al. (2017) demonstrated a functional relationship between the implementation of a differential reinforcement program and an increase in on-task behavior.

In another study performed with elementary school aged children, Petscher and Bailey (2008) found that a DRA paired with extinction (withdrawal of reinforcement) was successful in decreasing work refusal in an 8-year-old boy with an emotional disturbance educational classification. Using a functional analysis, Petscher and Bailey found that the subject engaged in task refusal to gain access to objects he wanted to play with. After researchers collected baseline data, they began an intervention phase in which the subject could earn 30 seconds of access to a preferred item by performing a task that showed engagement in the class, namely raising his hand. Researchers introduced extinction by not providing the desired objects when he engaged in task refusal and by implementing a graduated prompt hierarchy. This experiment demonstrated that with DRA interventions, task refusal decreased in both the extinction and the differential reinforcement conditions.

While these experiments showed that this intervention can be effective for several different populations, there is still little research indicating if this intervention could be applied as effectively with typically functioning adolescents (or adolescents who do not have a disability classification) in general education classrooms. It is important to continue this research with different populations and age groups to see if it can be applied in different settings.

Wait-Out Procedures

Another intervention that is commonly implemented for task refusal is referred to as a "wait-out" procedure. Ward, Parker, and Perdikaris (2017) published an article about three separate studies in which they implemented a "wait-out" procedure. In these studies, the interventionists presented the task, waited a specified amount of time, and then presented the task again. This procedure was repeated until the individual complied with the request. These studies included five children between the ages of 5 and 9, all of whom were diagnosed with autism spectrum disorder and all of whom had a history of not completing required tasks appropriately. In each of these studies the researchers saw an increase in compliant behavior after implementing a wait-out procedure.

This research indicates that these procedures can be effective in reducing task refusal in children with ASD. However, it is again unclear if this intervention could be applied with typically functioning adolescents. The paucity of research involving noncompliant behavior in typically functioning adolescents led to the performance of this study.

High-Probability Request Sequence

High-probability request sequences are also commonly used to increase task compliance. Lee, Belfiore, Scheeler, Hua, and Smith (2004) used a high-probability request sequence to increase task completion for two second-grade students who had a history of task refusal and disruptive behavior in the classroom. The researchers had the students copy down several high-probability words (words that were easy for them to write) on a worksheet before copying a low-probability word (which was harder for them to write). This procedure increased task completion for both students.

Ray, Skinner, and Watson (1999) used a high-probability request sequence to decrease task refusal in a 5-year-old boy with autism spectrum disorder in the classroom by transferring stimulus control from his mother to his teacher, thereby teaching the boy to respond to requests from his teacher as well as his mother. This boy was more likely to comply with requests given by his mother than his teacher, so Ray et al. (1999) had the mother give the boy several requests before having the teacher deliver a request. This intervention was shown to be successful in increasing compliance with requests given by the boy's teacher.

One study testing a high-probability request sequence was performed with a 13-year-old girl who had a learning disability. Wehby and Hollahan (2000) used a high-probability request sequence to decrease latency and increase engagement in performing math tasks. They found this intervention to be very successful in reducing task refusal. Their results could be an indication that this intervention might be effective with other adolescents.

While the interventions described above have been shown to increase task compliance in specific populations, further research is necessary to ascertain whether these interventions would be effective in increasing task compliance in typically functioning adolescents in general education classrooms. The only article found by the researchers performing this study that indicates the use of the high-probability request sequence in a population without a diagnosed disability was a study that evaluated the use of this intervention with adults in hostage negotiations (Hughes, 2009). While the intervention was found to be effective in the aforementioned study, more research would be helpful to support the use of the high-probability request sequence with a variety of target populations.

Most of the studies performed for differential reinforcement, wait-out procedures, and high-probability request sequences have been done with children or individuals with intellectual

disabilities, although two of the studies previously mentioned were performed with adolescents who were not reported as having a disability. This research is valuable, but it is important to find effective interventions for typically functioning adolescents in general education classrooms.

Classroom Interventions for Adolescents

There are interventions that have been designed to reduce task refusal in high-functioning adolescents. Most of them are designed for implementation with an entire group consisting of every student in the classroom. One of these interventions is a procedure called "choice cards." In this procedure students can choose a card with the assignments that they will complete. This intervention encourages compliance by allowing the student to choose which tasks they will do for the day (Cosden, Gannon, & Haring, 1995).

Another intervention that was designed for elementary and secondary education classrooms is called "dots for motivation." In this intervention, the students earn dots when they complete tasks, such as problems on a math worksheet. When the students run across a problem they would rather not do they can put the dot (from their earned "bank" of dots) on the problem, indicating that they would like to skip that problem (Doyle, Jenson, Clark, & Gates, 1999). This gives them the opportunity to escape parts of the task that they would rather not perform while still being compliant to the teacher's requests.

While the studies reviewed in this section have merit in specific situations, they can be difficult and time consuming to implement. There is little research about simple interventions used to deal with individual task refusal in typically functioning adolescents. For this reason, it is important to investigate the use of less complicated behavior interventions in general education classroom.

Purpose of the Current Study

The purpose of this study was to apply two of the previously mentioned interventions, namely a high-probability request sequence and differential reinforcement, in situations where a typically functioning adolescent was engaging in task refusal. These interventions were chosen because they are both likely to be effective interventions for escape-maintained task refusal, which is often found to be the function of noncompliance in classroom settings (Lee et al., 2004).

We hypothesize that the high-probability request sequence will effectively reduce escape-maintained task refusal because it offers the subjects access to more preferred tasks, allowing a temporary escape from less preferred tasks. Generally, when this intervention is used the ratio of preferred tasks to less preferred tasks will be higher, allowing students to experience fewer task requests for less preferred tasks. The subject may then come to associate prompts to perform tasks with access to more preferred tasks. The DRA used in this study will include rewards that offer escape from less preferred tasks, such as having less homework or more screen time during class. When these types of rewards are offered it is suspected that the DRA will also reduce escape-maintained task refusal.

Some of the other interventions discussed above, such as the wait-out procedure, might also be effective in reducing escape-maintained task refusal in this population. However, the wait-out procedure includes a level of extinction that might produce an extreme extinction burst. This could lead to challenging behaviors that would be difficult to manage in a classroom setting, particularly for adolescents. Some of the interventions above (particularly the wait-out procedure) also require more one-on-one intervention with the student than is possible in most classrooms. However, that does not mean that it would not be valuable to investigate the use of these interventions with this population at some point in the future.

A high-probability request sequence and a DRA procedure do not extinguish access to reinforcers that are maintaining problem behavior in such a dramatic manner and therefore are less likely to produce an extinction burst that is too difficult to handle in a classroom setting. These procedures also require less intervention from the teacher than some of the other procedures listed above. It is for this reason that the high-probability request sequence and DRA procedure were selected for this study. Both of these interventions are also simple, easy to implement, and adaptable to individual needs, which make them ideal for use in general education classrooms where the teachers often have little time to focus on individual intervention.

The high-probability request sequence and DRA procedure were implemented to examine if these interventions can be effective with this population in the hopes that a solution can be found to this problem that is simpler than many of the interventions designed for adolescents, such as the classroom interventions listed above, which are effective but difficult to implement on an individual basis. The high-probability request sequence and the DRA procedure are interventions that have been demonstrated to be effective with younger children, but there is very little research about either of these interventions being using in an adolescent population.

We hypothesized that implementing a high-probability request sequence and a differential reinforcement of alternative behaviors procedure would decrease the frequency of task refusal and increase the frequency of task compliance in adolescents in a classroom setting.

Research Questions

1. Will a high-probability request sequence be effective in decreasing the frequency of task refusal and increasing the frequency of task compliance in adolescents in a classroom setting?

2. Will a differential reinforcement of alternative behavior procedure be effective in decreasing the frequency of task refusal and increasing the frequency of task compliance in adolescents in a classroom setting?
3. Will the implementation of the above-mentioned procedures be considered effective and worthwhile to the teachers implementing them?
4. Will these procedures be considered helpful and effective to the students with whom they are implemented?

References

Belfiore, P. J., Basile, S. P., & Lee, D. L. (2008). Using a high probability command sequence to increase classroom compliance: The role of behavioral momentum. *Journal of Behavioral Education, 17*(2), 160–171. https://doi.org/10.1007/s10864-007-9054-x

Cosden, M., Gannon, C., & Haring, T. G. (1995). Teacher-control versus student-control over choice of task and reinforcement for students with severe behavior problems. *Journal of Behavioral Education, 5*(1), 11–27.

Doyle, P. D., Jenson, W. R., Clark, E., & Gates, G. (1999). Free-time and dots as negative reinforcement to improve academic completion and accuracy for mildly disabled students. *Proven Practice, 2*, 10-15.

Forehand, R. L. (1977). Child noncompliance to parent commands: Behavioral analysis and treatment. *Progress in Behavior Modification, 5*, 111–147.

Gansle, K. A., Noell, G. H., & Freeland, J. T. (2002). Can't Jane read or won't Jane read? An analysis of pre-reading skills designed to differentiate skill deficits from performance deficits. *The Behavior Analyst Today, 3*(2), 161–165. https://doi.org/10.1037/h0099976

Gorski, J. A., Slifer, K. J., Townsend, V., Kelly-Suttka, J., & Amari, A. (2005). Behavioural treatment of non-compliance in adolescents with newly acquired spinal cord injuries. *Pediatric Rehabilitation, 8*(3), 187–198. https://doi.org/10.1080/13638490400021438

Hecker, B., Young, E. L., & Caldarella, P. (2014). Teacher perspectives on behaviors of middle and junior high school students at risk for emotional and behavioral disorders. *American Secondary Education, 42*(2), 20–32.

Houlihan, D., & And, O. (1992). A review of behavioral conceptualizations and treatments of child noncompliance. *Education and Treatment of Children, 15*(1), 56–77.

Hughes, J. (2009). A pilot study of naturally occurring high-probability request sequences in hostage negotiations. *Journal of Applied Behavior Analysis, 42*(2), 491–496.

Jessel, J., Ingvarsson, E. T., Whipple, R., & Kirk, H. (2017). Increasing on-task behavior of an adolescent with autism using momentary differential reinforcement. *Behavioral Interventions, 32*(3), 248–254. https://doi.org/10.1002/bin.1480

Lee, D. L., Belfoire, P. J., Scheeler, M. C., Hua, Y., & Smith, R. (2004). Behavioral momentum in academics: Using embedded high-p sequences to increase academic productivity. *Psychology In The Schools, 41*(7), 789–801.

Lieberman, L. M. (1983). Can't vs. won't: The razor's edge. *Journal of Learning Disabilities, 16*(8), 502. https://doi.org/10.1177/002221948301600817

O'Neill, S. C., & Stephenson, J. (2014). Evidence based classroom and behaviour management content in Australian pre-service primary teachers' coursework: Wherefore art thou? *Australian Journal Of Teacher Education, 39*(4). https://doi.org/10.14221/ajte.2014v39n4.4

Petscher, E. S., & Bailey, J. S. (2008). Comparing main and collateral effects of extinction and differential reinforcement of alternative behavior. *Behavior Modification, 32*(4), 468–488. https://doi.org/10.1177/0145445507309032

Ray, K. P., Skinner, C. H., & Watson, T. S. (1999). Transferring stimulus control via momentum to increase compliance in a student with autism: A demonstration of collaborative consultation. *School Psychology Review, 28*(4), 622-628.

Ward, S., Parker, A., & Perdikaris, A. (2017). Task as reinforcer: A reactive alternative to traditional forms of escape extinction. *Behavior Analysis in Practice, 10*(1), 22–34. https://doi.org/10.1007/s4067-016-0139-7

Wehby, J. H., & Hollahan, M. S. (2000). Effects of high-probability requests on the latency to initiate academic tasks. *Journal of Applied Behavioral Analysis, 33*(2), 259–262. https://doi.org/10.1901/jaba.2000.33-25

APPENDIX B

Consent Form

Simple Behavioral Interventions for Adolescents with Characteristics of Emotional Disturbance in a Classroom Setting

Parental Permission for a Minor

Introduction
This research study is being conducted by Terisa Gabrielsen and Kerry Farr at Brigham Young University to determine the effectiveness of specific behavioral interventions to increase learning. Your child was invited to participate because they were referred by a teacher or school psychologist.

Procedures
If you agree to give consent for your child to participate in this research study, the following will occur:
· You will complete an online survey about your child's health and behavioral history as well as some questions about your family history. This survey will most likely take 30-45 minutes to complete.
· Your child's teacher will implement the behavioral interventions described above in the classroom.
· Your child will be video recorded during some class sessions.
· Your child will complete a brief online survey at the end of the study asking how they felt about the procedures used. This survey will most likely take 10 minutes to complete.
· The researcher may contact you later to clarify your interview answers for approximately 15 minutes.

Risks/Discomforts
There is the possibility that your child will experience some anxiety about new procedures and expectations for completing work in the classroom.
To reduce this discomfort, the investigators will stay at the back of the room and will not interact with the student in the classroom. The teacher will be delivering the intervention, which is not very unusual in classroom settings. The schools involved in this study often have observers come from BYU, so the investigators will most likely not arouse any suspicions in other students that anything is different.

Benefits
Your child will receive behavioral intervention as a direct result of being involved in this study. These interventions are hypothesized to help your child complete classroom tasks more frequently, which will provide more opportunities for learning.
Your participation in this research may also benefit other students who have a hard time completing tasks in the classroom in the future.

Confidentiality
Data and video recordings will be stored in a locked cabinet, in a locked office in a locked suite on BYU campus. Only the researchers will have access to these items. In any publications that may result from this study, your child's name will be changed to protect anonymity. No identifying information about your child will ever be given to any outside parties. And no one will be able to recognize the data we report as belonging to your child.

Participation
Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy to your child's placement in school or their grades.

Compensation
There is no compensation for participating in the research itself, but the behavioral interventions we use will provide your child with the opportunity to earn privileges and possibly items that he or she prefers. If items or treats are preferred, they will be limited to very small monetary value (<$5.00). Your child's ability to earn privileges or rewards is determined by his or her compliance with classroom tasks.

Questions about the Research
If you have questions regarding this study, you may contact Kerry Farr at (xxx) xxx-xxxx for further information.

Questions about Your Rights as Research Participants
If you have questions regarding your rights as a research participant contact IRB Administrator at (801) 422-1461; A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu.

Statement of Consent
I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.
Child's Name:_____
Parent Name:_____ Signature:_____
Date:_____

Assent to be a Research Subject

Introduction
This research study is being conducted by Terisa Gabrielsen and Kerry Farr at Brigham Young University to find out if behavioral interventions to help students learn. You were invited to participate because you were referred by a teacher or school psychologist.

Procedures
If you agree to participate in this research study, the following will occur:

- Your parent or guardian will complete an online survey about your health and behavioral history as well as some questions about your family history.
- Your teacher will do some simple behavioral interventions to give you opportunities to succeed in the classroom.
- You will be video recorded during some class sessions.
- You will complete a brief online survey at the end of the study asking how you felt about the procedures used. This survey will most likely take about 1 minute to complete.
- The researcher may contact you later to clarify your interview answers for no longer than 15 minutes.

Risks/Discomforts
There is the possibility that you will experience some anxiety about a new procedure and expectations for completing work as part of the study.
To make this easier for you, the researchers will stay at the back of the room and will not interact with you in the classroom. The schools involved in this study often have observers come from BYU, so the investigators will most likely not arouse any suspicions in other students and they may not notice that anything is different.

Benefits
We think these interventions will help you complete classroom tasks more often, which will provide you with more opportunities for learning and earning privileges.
Your participation may provide us with information that may help other students with similar problems to be successful in their classrooms as well.

Confidentiality
Any information about you and video recordings will be stored in a locked office on BYU campus. Only the researchers will have access to these records. If we publish our results from this study your name will be changed to protect anonymity. No one will be able to tell that you were involved in the study or that the data we report was about you.

Participation
Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without worrying about your placement in school or your grades.
Questions about the Research If you have questions regarding this study, you may contact Kerry Farr at (xxx) xxx-xxxx for further information.

Questions about Your Rights as Research Participants
If you have questions regarding your rights as a research participant contact IRB Administrator at (801) 422-1461; A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu.

Statement of Consent
I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.
Name (Printed): _____ Signature:_____
Date: _____

APPENDIX C

Recruitment Materials

Recruitment Email
To whom it may concern:

Adolescents who refuse to do classroom work is one of the most difficult problems faced by teachers in secondary schools.

My name is Kerry Farr. I am a graduate student in the BYU Special Education Master's Program. I am looking for subjects for a research project that I am completing for my master's thesis. In this study we are going to test two well established behavioral interventions applied in a simple intervention with adolescents who could be classified as having emotional disturbance who also engage in task refusal. The two interventions are a high probability request sequence and differential reinforcement of alternative behaviors. If you are interested in more information regarding this study I can send you more detailed information about our methods.

I am looking for up to 12 participants across the BYU Public School Partnership. I am looking for subjects between the ages of 13 and 18. I would be working one on one with the students in their classrooms for short periods of time during the day. We will work with the students for up to 2-3 months or however long it takes for the behavior problem to stabilize. If you have a student that would be a good candidate for this study, you can contact Kerry Farr at kerry.farr@outlook.com.

Thank you for your assistance in finding subjects for this research. Your help is very much appreciated. If you have any questions or concerns please let me know. Please let me know by January 20, 2018 if you are in support of this project. If you are in support of this project we can talk about recruitment.

Sincerely,
Kerry Farr
Graduate Student
Special Education
BYU
(xxx) xxx-xxxx

APPENDIX D

Instruments

BASC Historical Information Survey

The following questions were adapted from the Behavior Assessment Scales for Children, Third Edition (BASC-3) Structured Developmental History (Reynolds and Kamphaus, Pearson Publishing). This online version is used in conjunction with a purchased protocol. Some questions have not been included. Two questions regarding relevant medications have been added. Thank you for completing the questionnaire. Your information here will help us to know if your student is a good candidate for this classroom intervention. If you are uncomfortable or unable to answer any of the questions, you may skip that question and proceed to the next. The time needed to complete the questionnaire is about 10 minutes, but some people may take 20 minutes. You are allowed to come back to the questionnaire if you are interrupted before you finish. YOUR RESPONSES ARE COMPLETELY CONFIDENTIAL AND WILL NOT BE SHARED WITH ANYONE OTHER THAN THE RESEARCHER.

Q2 What is this child's primary language

o English (1)

o Spanish (2)

o Other (3)

Q3 What is this child's secondary language?

o English (1)

o Spanish (2)

o None (3)

o Other (4)

Q4 What is your name? _____

Q6 What is the student's name?_____

Q7 Your relationship to this child

o Mother (1)

o Father (2)

o Stepmother (3)

o Stepfather (4)

o Other (5) _____

Information about the student's mother

Q8 Mother's name?_____

Q9 Stepmother?

o Yes (1)

o No (2)

Q10 Age_____

Q11 Occupation_____

Q12 How long with present employer?_____

Q13 Highest grade completed_____

Q14 Primary language spoken

o English (1)

o Spanish (2)

o Other (3)

Q16 Secondary language spoken

o English (1)

o Spanish (2)

o None (3)

o Other (4)

Information about the student's father

Q18 Father's name_____

Q19 Stepfather?

o Yes (1)

o No (2)

Q20 Age_____

Q21 Occupation_____

Q22 How long with present employer_____

Q23 Highest grade completed_____

Q24 Primary language spoken

- English (1)
- Spanish (2)
- Other (3)

Q25 Secondary language spoken

- English (1)
- Spanish (2)
- None (3)
- Other (4)

Information about other parents

Q26 Does the student have other parent(s)/stepparent(s)?

- Yes (If yes, please describe) (1) _____
- No (2)

Q28 With which adult(s) does this child live? (Check all that apply)

- Mother (1)
- Father (2)
- Stepmother (3)
- Stepfather (4)
- Other (If other, please list them) (5)_____

Q29 How long in current living situation_____

Q30 Is this child closer to one parent than the other?

- Yes (If yes, which one?) (1) _____
- No (2)

Q31 Has this child ever experienced any parental separations, divorces, or death?

- Yes (If yes, please provide details such as when it occurred and how old the student was) (1)_____
- No (2)

Q32 If parents are separated or divorced, who has custody of the student?

- Mother (1)
- Father (2)

- Stepmother (3)
- Stepfather (4)
- Other (5)
- Not applicable (6)
- Shared custody (please describe) (7)_____

Q33 If parents are separated or divorced, how often does the student see the other parent?

- Weekly or more often (1)
- Once or twice a month (2)
- Few times a year (3)
- Never (4)
- Not applicable (5)

Information about Brothers/Sisters

Q35 How many brothers and sisters does the student have? Please describe the siblings genders and ages as well as whether or not they are living at home._____

Q36 How does the student get along with his/her siblings?_____

Information about the student's residence

Q38 Please select this child's residence.

- Apartment (1)
- Single Home (2)
- If other, please specify (3) _____

Q39 How long at current residence?_____

Information about family relations

Q41 Check the activities in which the student often participates with the family. (Check all that apply)

- Movies (1)
- Games (2)
- Meals (3)
- Sports (4)
- Conversations (5)
- Trips (6)
- Visits with relatives (7)

- Television (8)
- Church (9)
- Other (10) _____

Q42 What is the language spoken in the home

- English (1)
- Spanish (2)
- If other, please specify (3) _____

Q43 How frequently does this child see grandparents?

- Weekly or more often (1)
- Once or twice a month (2)
- Few times a year (3)
- Never (4)
- No grandparents living (5)

Q44 What do you enjoy most about this child?_____

Q45 What do you find most difficult about raising this child?_____

Q46 What would you like this child to be when he/she grows up?_____

Q47 What level of education do you hope this child will complete? (check one)

- High School (1)
- Technical or Vocational School (2)
- College (3)
- Law, Medical, Other Advanced Studies (4)

Q48 Who is mainly in charge of discipline in the home?_____

Q49 Do all caregivers agree on discipline?_____

Q50 Describe discipline techniques._____

Information about Pregnancy

Q53 Was the mother under a doctor's care during pregnancy?

- Yes (1)
- No (2)

Q55 Check any of the following complications that occurred during the pregnancy.

- ☐ Difficulty in conception (1)
- ☐ Measles (2)
- ☐ Excessive swelling (3)
- ☐ Flu (4)
- ☐ Toxemia (5)
- ☐ Excessive vomiting (6)
- ☐ Emotional problems (7)
- ☐ Anemia (8)
- ☐ Abnormal weight gain (9)
- ☐ German measles (10)
- ☐ Vaginal bleeding (11)
- ☐ High blood pressure (12)
- ☐ Maternal injury (13)
- ☐ Hospitalization during pregnancy (14)
- ☐ X-Rays during pregnancy (15)
- ☐ Medications used during pregnancy (16)
- ☐ Alcohol used during pregnancy (17)
- ☐ Cigarettes used during pregnancy (18)
- ☐ Other drugs used during pregnancy (19)
- ☐ Other complications (please describe) (20)_____

Information about Birth

Q57 At this child's birth, what was the mother's age?_____

Q58 Father's age?_____

Q62 Length of pregnancy (in weeks)_____

Q63 Length of labor (in hours)_____

Q64 Birth weight (in pounds and ounces)_____

Q65 Apgar score at birth/Apgar score at 5 minutes_____

Q66 Child's condition at birth_____

Q67 Mother's condition at birth_____

Q68 Check any of the following complications that occurred during birth.

- ▢ Forceps used (1)
- ▢ Breach birth (2)
- ▢ Labor induced (3)
- ▢ Caesarean delivery (4)
- ▢ Other delivery complications (describe) (5)_____
- ▢ Incubator (6)
- ▢ Jaundiced: biliruben lights? (7)
- ▢ Breathing problems right after birth (8)
- ▢ Supplemental oxygen (9)

Q70 How many days was the mother in the hospital?_____

Q71 How many days was this child in the hospital?_____

Q72 At what age did this child first do the following?

- ▢ Turn over (1) _____
- ▢ Sit Alone (2) _____
- ▢ Crawl (3) _____
- ▢ Stand alone (4) _____
- ▢ Walk alone (5) _____
- ▢ Walk up stairs (6) _____
- ▢ Walk down stairs (7) _____
- ▢ Show interest in or attraction to sound (8)_____
- ▢ Understand first words (9) _____
- ▢ Speak first words (10) _____
- ▢ Speak in sentences (11) _____

Q78 Has this child experienced any of the following problems? (Check all that apply)

- ▢ Walking difficulty (1)

- Unclear speech (2)
- Feeding problem (3)
- Underweight problem (4)
- Overweight problem (5)
- Colic (6)
- Sleep problem (7)
- Eating problem (8)
- Difficulty learning to ride a bike (9)
- Difficulty learning to skip (10)
- Difficulty learning to throw or catch (11)

Q79 Information about Development

Q80 During this child's first 4 years, were any special problems noted in the following areas? (Check all that apply)

- Eating (1)
- Motor skills (2)
- Sleeping too much (3)
- Temper tantrums (4)
- Sleeping too little (5)
- Failure to thrive (6)
- Separating from parents (7)
- Excessive crying (8)
- Toilet Training (9)

Medical History

Q84 Please check any of the childhood illnesses this child has had.

- Measles (1)
- German Measles (2)
- Mumps (3)
- Chicken Pox (4)
- Tuberculosis (5)
- Whooping cough (6)

- ☐ Scarlet fever (7)
- ☐ Rheumatic fever (8)
- ☐ Diptheria (9)
- ☐ Meningitis (10)
- ☐ Encephalitis (11)
- ☐ Anemia (12)
- ☐ Fever above 104 degrees (13)
- ☐ Broken bones (14)
- ☐ Head injury (15)
- ☐ Coma or any loss of consciousness (16)
- ☐ Sustained high fever (17)

Q85 Has this child ever been on any medication for 6 months or more?

- o Yes (f yes, please describe) (1)
- o No (2)

Q86 Please indicate any of the following problems this child **currently** has. If an item is selected, please indicate the frequency. (Check all that apply)

- ☐ Frequent colds (1) _____
- ☐ Chronic cough (2) _____
- ☐ Asthma (3) _____
- ☐ Hay fever (4) _____
- ☐ Sinus condition (5) _____
- ☐ Shortness of breath or dizziness with physical exertion (6)_____
- ☐ Activity limitation due to heart condition (7)_____
- ☐ Heart murmur (8) _____
- ☐ Excessive vomiting (9) _____
- ☐ Frequent diarrhea (10) _____
- ☐ Constipation (11) _____
- ☐ Stomach pain (12) _____
- ☐ Urination in pants/bed (13) _____
- ☐ Pain while urinating (14) _____

- ☐ Excessive urination (15) _____
- ☐ Muscle pain (17) _____
- ☐ Clumsy walk (18) _____
- ☐ Poor posture (19) _____
- ☐ Other muscle problems (20) _____

Q87 Please check any of the following problems this child currently has. (Check all that apply)

- ☐ Frequent rashes (1)
- ☐ Bruises easily (2)
- ☐ Sores (3)
- ☐ Severe acne (4)
- ☐ Itchy skin (eczema) (5)
- ☐ Seizures/convulsions (6)
- ☐ Speech defects (7)
- ☐ Accident prone (8)
- ☐ Bites nails (9)
- ☐ Sucks Thumb (10)
- ☐ Grinds teeth (11)
- ☐ Has tics/twitches (12)
- ☐ Bangs head (13)
- ☐ Rocks back and forth (14)
- ☐ Bowel movement in pants/bed (15)

Q89 Has this child ever taken medication to help him or her sleep?

- o Yes (1)
- o No (2)

Q90 Has this child ever taken medication for ADD, ADHD, or similar problems?

- o Yes (1)
- o No (2)

Q91 Describe any allergies the child has._____

Q125 Has this child ever taken medication for mood disorders?

o Yes (1)

o No (2)

Q126 Has this child ever taken any medication for anxiety?

o Yes (1)

o No (2)

Q92 Please check any of the following problems this child **currently** has. (Check all that apply)

□ Stuttering (1)

□ Unclear speech (2)

□ Other speech problems (3)

□ Ear infections (4)

□ Hearing problems (5)

□ Ear tubes (6)

□ Vision problems (7)

□ Wears glasses or contacts (8)

Q96 Is this child currently on medication?

o Yes (if yes, please describe) (1) _____

o No (2)

Q97 Has this child ever been physically or sexually abused?

o Yes (If yes, please describe) (1) _____

o No (2)

Q98 Has this child ever had psychological counseling or therapy?

o Yes (If yes, please describe) (1) _____

o No (2)

Q99 Has this child ever had a neurological exam?

o Yes (If yes, please describe) (1) _____

o No (2)

Q100 Has this child ever had a psychological or psychiatric exam?

o Yes (If yes, please describe) (1) _____

o No (2)

Information about Family Health

Q102 Have any family members had any of the following? (Check all that apply)

- ☐ Cancer (1)
- ☐ Physical handicap (5)
- ☐ Stroke (6)
- ☐ Alzheimer's disease (8)
- ☐ Huntington's chorea (10)
- ☐ Muscular dystrophy (11)
- ☐ Parkinson's disease (12)
- ☐ Tay-Sachs disease (14)
- ☐ Tourette's Syndrome (15)
- ☐ Birth Defect (16)
- ☐ Cerebral Palsy (17)
- ☐ Kidney disease (19)
- ☐ Multiple sclerosis (21)
- ☐ Alcohol/drug abuse (22)
- ☐ Behavior disorder (23)
- ☐ Emotional disturbance (24)
- ☐ Mental illness (25)

Q103 Please describe the mother's present health._____

Q104 Has anyone in the family ever been in special education?

- o Yes (If yes, please describe) (1) _____
- o No (2)

Information about Friendships

Q106 Please indicate how this student relates to others their age. (Check all that apply)

- ☐ Has problems relating to other people his/her age (1)
- ☐ fights frequently with peers (2)
- ☐ Prefers spending time with younger individuals (3)
- ☐ Has difficulty making friends (4)

- Prefers to be alone (5)

Q107 What role does this student take in peer group games (for example, leader, follower, etc.)?_____

Q108 Please indicate whether any of this student's friends engage in any of the following behaviors. (Check all that apply)

- Smoke cigarettes (1)
- Inhale toxic substances (e.g., paint) (2)
- Use drugs illegally (e.e., marijuana, cocaine, prescription drugs prescribed to to others) (3)
- Chew tobacco (4)
- Drink beer, wine, or liquor (5)

Q109 What activities does this student enjoy? (Check all that apply)

- Sports (please describe) (1) _____
- Hobbies (please describe) (2) _____
- Other (please describe) (3) _____

Q110 Has the student's interest in participating in these activities declined recently?

- o Yes (If yes, please describe) (1) _____
- o No (2)

Q111 Please indicate whether this child exhibits any of the following behaviors. (Check all that apply)

- Is easily overstimulated in play (1)
- Has a short attention span (2)
- Lacks self-control (3)
- Seems unhappy most of the time (4)
- Withholds affection (5)
- Hides feelings (6)
- Has fears (7)
- Seems overly energetic in play (8)
- Seems impulsive (9)
- Overreacts when faced with a problem (10)
- Seems uncomfortable meeting new people (11)

- Requires a lot of parental attention (12)
- Cannot calm down (13)

Information about Educational History

Q119 If there were any problems in kindergarten, please describe them below._____
Elementary/HIgh School

Q121 Please indicate whether this child has had any of the following school experiences. Please describe. (Check all that apply)

- Has changed schools for reasons other than normal academic progression (1)_____
- Has been retained a grade in school (2)_____
- Has skipped a grade in school (3) _____
- Has difficulty with reading (4) _____
- Has difficulty with math (5) _____
- Gets poor grades (6) _____
- Has been tested for Special Education (7)_____
- Currently is placed in Special-Education Class (8)_____
- Dislikes going to school (9) _____
- Is absent from school frequently (10)_____

Q122 When will this student graduate?

_____

Q123 If you have any concerns about the quality of this child's school or teachers, please describe below_____

Q124 If you have any additional comments before the questions are complete, please type them in below._____

Social Validity Survey for Teachers

Q26 Select the option that best represents your experience working on a study for task refusal interventions with Kerry Farr, a graduate student in Special Education at BYU. Please answer as accurately as possible. We estimate between 3-6 minutes are required to complete this questionnaire. You may come back to it if you are interrupted before finishing.

Q27 What is the name of the student you are working with for the study?

_____

Q1 How clear is your understanding of the high probability request sequence used in this study?

o Extremely unclear (1)

o Somewhat unclear (2)

o Neither clear nor unclear (3)

o Somewhat clear (4)

o Extremely clear (5)

Q2 How clear is your understanding of the differential reinforcement procedure used in this study?

o Extremely unclear (1)

o Somewhat unclear (2)

o Neither clear nor unclear (3)

o Somewhat clear (4)

o Extremely clear (5)

Q3 How acceptable did you find the high probability request sequence used in this study for improving task compliance with the student you worked with?

o Extremely unacceptable (1)

o Somewhat unacceptable (2)

o Neither acceptable nor unacceptable (3)

o Somewhat acceptable (4)

o Extremely acceptable (5)

Q7 How acceptable did you find the differential reinforcement procedure used in this study for improving task compliance with the student you worked with?

o Extremely unacceptable (1)

o Somewhat unacceptable (2)

o Neither acceptable nor unacceptable (3)

o Somewhat acceptable (4)

o Extremely acceptable (5)

Q8 How much effort was required for you to implement the high probability request sequence in your classroom?

o A great deal (1)

o A lot (2)

o A moderate amount (3)

o A little (4)

o None at all (5)

Q9 How much effort was required for you to implement the differential reinforcement procedure in your classroom?

o A great deal (1)

o A lot (2)

o A moderate amount (3)

o A little (4)

o None at all (5)

Q10 To what extent do you think there might be disadvantages to implementing the high probability request sequence used in this study?

o A great deal (1)

o A lot (2)

o A moderate amount (3)

o A little (4)

o None at all (5)

Q11 To what extent do you think there might be disadvantages to implementing the differential reinforcement procedure used in this study?

o A great deal (1)

o A lot (2)

o A moderate amount (3)

o A little (4)

o None at all (5)

Q12 Given the amount of effort invested in the high probability request sequence, how reasonable do you find it to be?

o Extremely unreasonable (1)

o Somewhat unreasonable (2)

o Neither reasonable nor unreasonable (3)

o Somewhat reasonable (4)

o Extremely reasonable (5)

Q13 Given the amount of effort invested in the differential reinforcement procedure, how reasonable do you find it to be?

o Extremely unreasonable (1)

o Somewhat unreasonable (2)

o Neither reasonable nor unreasonable (3)

o Somewhat reasonable (4)

o Extremely reasonable (5)

Q14 Compared to other students you teach, how significant is your student's task refusal?

o Far above average (1)

o Somewhat above average (2)

o Average (3)

o Somewhat below average (4)

o Far below average (5)

Q15 How effective was the high probability request sequence used in this study at reducing task refusal?

o Not effective at all (1)

o Slightly effective (2)

o Moderately effective (3)

o Very effective (4)

o Extremely effective (5)

Q16 How effective was the differential reinforcement procedure used in this study at reducing task refusal?

o Not effective at all (1)

o Slightly effective (2)

o Moderately effective (3)

o Very effective (4)

o Extremely effective (5)

Q17 How disruptive was the high probability request sequence to your classroom routine?

o Extremely disruptive (1)

o Very disruptive (2)

o Moderately disruptive (3)

o Slightly disruptive (4)

o Not disruptive at all (5)

Q18 How disruptive was the differential reinforcement procedure to your classroom routine?

o Extremely disruptive (1)

o Very disruptive (2)

o Moderately disruptive (3)

o Slightly disruptive (4)

o Not disruptive at all (5)

Q19 How much did you enjoy implementing the high probability request sequence with this student?

o Not at all (1)

o A little (2)

o A moderate amount (3)

o A lot (4)

o A great deal (5)

Q20 How much did you enjoy implementing the differential reinforcement procedure with this student?

o Not at all (1)

o A little (2)

o A moderate amount (3)

o A lot (4)

o A great deal (5)

Q21 Compared to other students, how severe was your student's task refusal before implementing these interventions?

o Far above average (1)

o Somewhat above average (2)

o Average (3)

o Somewhat below average (4)

o Far below average (5)

Q22 Compared to other students, how severe was your student's task refusal after implementing the high probability request sequence?

o Far above average (1)

o Somewhat above average (2)

o Average (3)

o Somewhat below average (4)

o Far below average (5)

Q23 Compared to other students, how severe was your student's task refusal after implementing the differential reinforcement procedure?

o Far above average (1)

o Somewhat above average (2)

o Average (3)

o Somewhat below average (4)

o Far below average (5)

Q24 How likely would you be to recommend a high probability request sequence to others who teach students who engage in task refusal?

- o Not likely at all (1)
- o Slightly likely (2)
- o Somewhat likely (3)
- o Very likely (4)
- o Extremely likely (5)

Q25 How likely would you be to recommend differential reinforcement to others who teach students who engage in task refusal?

- o Not likely at all (1)
- o Slightly likely (2)
- o Somewhat likely (3)
- o Very likely (4)
- o Extremely likely (5)

Social Validity Survey for Participants.

Q9 To respond to the questions select 'Yes' or 'No'. Please respond to each question as accurately as possible. There are only 8 questions, so it usually takes about 1 minute to finish.

Q1 Do you find it easy to follow instructions from your teachers?

o Yes (1)

o No (2)

Q2 Was it easier to follow instructions when your teachers used the “do the easy part first” procedure?

o Yes (1)

o No (2)

Q3 Would you like your teacher to continue using the “do the easy part first” procedure?

o Yes (1)

o No (2)

Q4 Would you recommend that teachers use the “do the easy part first” procedure with other students?

o Yes (1)

o No (2)

Q5 Was it easier to follow instructions when you were given rewards for following instructions?

o Yes (1)

o No (2)

Q6 Would you like your teacher to continue offering rewards for following instructions?

o Yes (1)

o No (2)

Q7 Would you recommend that teachers offer rewards for following instructions to other students?

o Yes (1)

o No (2)

Student's Name: _____
Baseline Data Sheet

1. **What was the request?**: Write down what the teacher asked the student to do in a few words (e.g., "take out your books", "write your name", "read along", etc.) This includes group requests and individual requests.
2. **How much time passed before the student followed instructions?**: Write down how many seconds passed between the end of the teacher's instruction and the initiation of the task by the student.
3. **Category of Refusal/Non Refusal**: Refusals or non refusals (taking longer than 60 seconds to comply) will be categorized into four categories: passive (sitting quietly while not complying with the request), avoidant (engaging in other behaviors to avoid performing the task), verbal/gestural positive (indicating verbally or through gestures that they will perform the task), and verbal/gestural negative (indicating verbally or through gestures that they will not perform the task).
4. Thank you so much! Let me know if you have any questions (x)

Date	What was the request?	How much time passed before the student followed instructions (in seconds)?	Category of Refusal/Non Refusal

Student's Name: _____
High Probability Request Sequence Data Sheet

1. **List the High P Requests:** These are the simple requests given before the hard task is presented. (e.g., "Raise your hand", "write your name", "take out a piece of paper", etc.)
2. **What was the low p request?**: Write down the hard task the teacher asked the student to do in a few words (e.g., "take out your books", "write your name", "read along", etc.) This includes group requests and individual requests.
3. **How much time passed before the student followed instructions?**: Write down how many seconds passed between the end of the teacher's instruction and the initiation of the task by the student.
4. **Category of Refusal/Non Refusal**: Refusals or non refusals (taking longer than 60 seconds to comply) will be categorized into four categories: passive (sitting quietly while not complying with the request), avoidant (engaging in other behaviors to avoid performing the task), verbal/gestural positive (indicating verbally or through gestures that they will perform the task), and verbal/gestural negative (indicating verbally or through gestures that they will not perform the task).
5. **Did the teacher wait 2-10 minutes after the request if the student refused?:** If the student didn't follow the instructions within 60 seconds the teacher should wait 2-10 minutes before presenting any requests again.
6. Thank you so much! Let me know if you have any questions (x)

Date	List the High P Requests	What was the low p request?	How much time passed before the student followed instructions (in seconds)?	Category of Refusal/Non Refusal	Did the teacher wait 2-10 minutes after the request if the student refused?
					Yes No
					Yes No
					Yes No
					Yes No
					Yes No
					Yes No
					Yes No
					Yes No
					Yes No
					Yes No
					Yes No
					Yes No

High P Low P Treatment Fidelity

1. Indicate the date you are taking data for.
2. Write your initials.
3. Write the name of the subject the request was directed at if it was directed at one of the students in the study or list all of the study subjects present if it was a group request.
4. Record each request made. Write down any high probability requests made and the low probability request made. Then indicate the category of refusal (separate them if the students you are watching respond differently).
5. Indicate the category of refusal/non-refusal. Categories: verbal/gestural positive (indicating compliance through words or gestures), verbal/gestural negative (indicating non-compliance through words or gestures), passive (sitting quietly and not complying), or avoidant (engaging in other behaviors to avoid the task). If several subjects are given the request indicate this for each student.
6. Indicate if the request was a group request or an individual request.

Date	Your Initials	Name of Subject(s)	High P Requests	Low P Request	Category of Refusal/Non-Refusal	Group or Individual

Student's Name: _____
DRA Data Sheet

1. **What was the request?**: Write down what the teacher asked the student to do in a few words (e.g., "take out your books", "write your name", "read along", etc.) This includes group requests and individual requests.
2. **How much time passed before the student followed instructions?**: Write down how many seconds passed between the end of the teacher's instruction and the initiation of the task by the student.
3. **Category of Refusal/Non Refusal**: Refusals or non refusals (taking longer than 60 seconds to comply) will be categorized into four categories: passive (sitting quietly while not complying with the request), avoidant (engaging in other behaviors to avoid performing the task), verbal/gestural positive (indicating verbally or through gestures that they will perform the task), and verbal/gestural negative (indicating verbally or through gestures that they will not perform the task).
4. Thank you so much! Let me know if you have any questions (x)

Date	What was the request?	How much time passed before the student followed instructions (in seconds)?	Category of Refusal/Non Refusal