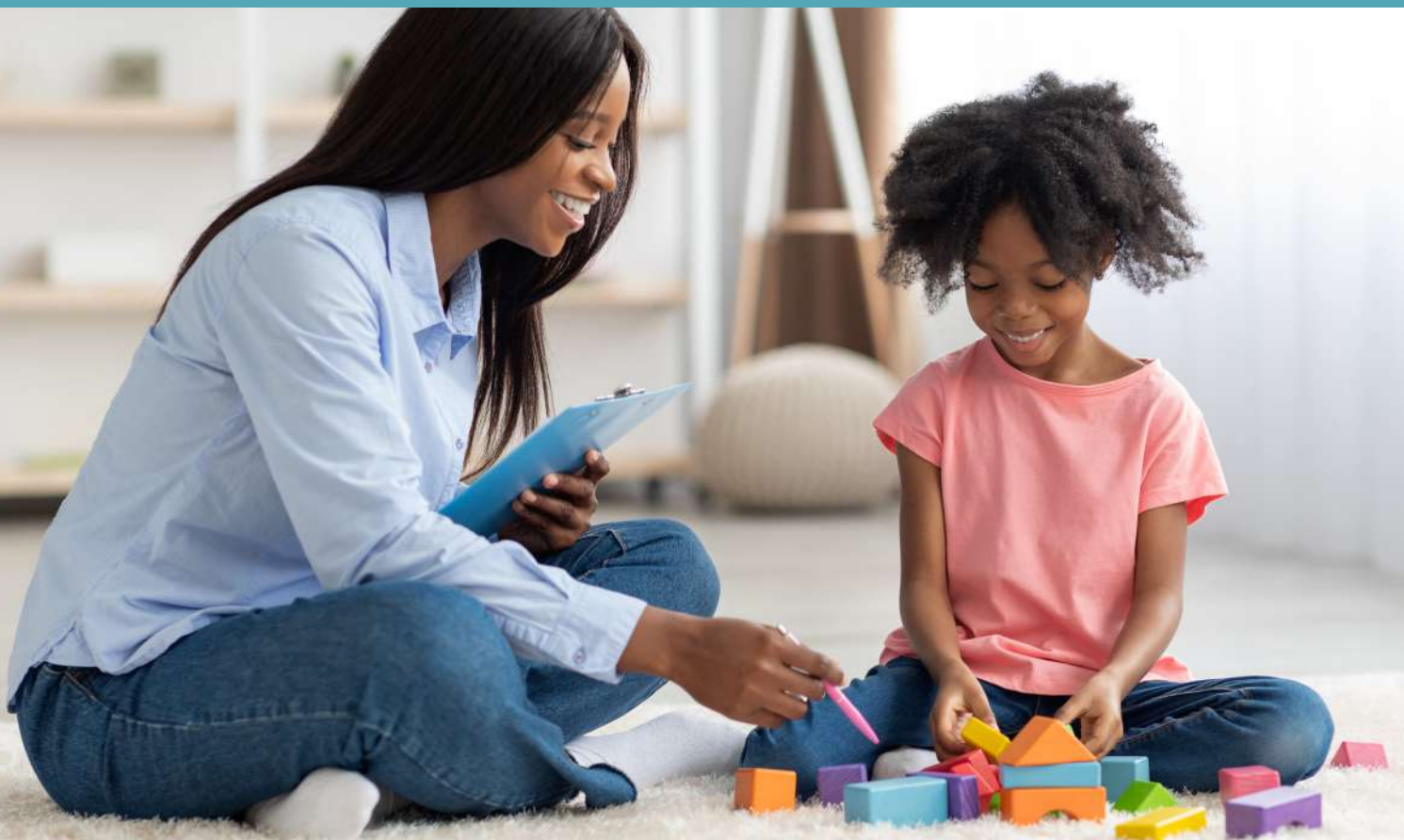




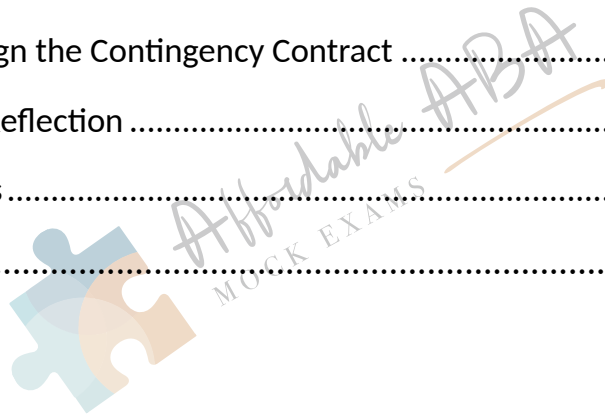
Affordable ABA
MOCK EXAMS

Behavior Change Strategies Applicable in Classroom Management Systems



Introduction	3
Section 1: Overview of Group Contingencies	4
Advantages of Group Contingencies	4
Dependent Group Contingency	6
Independent Group Contingency	8
Interdependent Group Contingency.....	9
Section 1 Personal Reflection	11
Section 1 Key Words.....	11
Section 2: The Good Behavior Game and The Good Student Game.....	12
The Good Behavior Game	12
The Good Student Game	13
Section 2 Personal Reflection	15
Section 2 Key Words.....	15
Section 3: Group Contingency Implementation Procedures.....	15
Step 1: Identify and Define the Targeted Behavior that is of Concern in the Environment	15
Step 2: Record Baseline Data and Determine the Number of Students that Engage in the Targeted Behavior	16
Step 3: Determine the Reinforcers for the Students	17
Step 4: Choose and Develop the Group Contingency.....	19
Step 5: Time to Implement the Group Contingency.....	20
Step 6: The Impact of the Group Contingency Should be Evaluated.....	22
Section 3 Personal Reflection	26
Section 3 Key Words.....	26
Section 4: Contingency Contracting.....	26

Components of a Contingency Contract.....	27
Avenues for Applying a Contingency Contract	29
Principles Associated with Contingency Contracting.....	31
Section 4 Personal Reflection	33
Section 4 Key Words.....	33
Section 5: Development of a Contingency Contract	33
Step 1: Convene a Meeting	33
Step 2: List A Completion	34
Step 3: List B Completion.....	35
Step 4: List C Completion.....	36
Step 5: Write and Sign the Contingency Contract	37
Section 5 Personal Reflection	40
Section 5 Key Words.....	40
References	42



Introduction

Oftentimes, teachers express that they are more than capable of addressing the academic needs of the students in their classroom. However, they may feel as though they are underprepared to both prevent and address any challenging behaviors that may present themselves in the classroom environment. Classroom management is a tremendous concern of teachers within school systems (Wei et al., 2009). Therefore, it is imperative that school systems address various behavior management practices and the behavior of students within the classroom environment. Students with or who are at-risk for emotional and behavioral disorders (EBD) are in particular need of behavioral interventions that can help to minimize disruptions in the classroom.

Challenging behaviors that are often associated with individuals that exhibit EBD include defiance, inappropriate outburst, physical aggression, or withdrawn behaviors (Hirsch et al., 2016). These behaviors may significantly impact classroom instruction and the learning that occurs within the educational environment for other students. Students that are diagnosed with different disabilities are consistently being educated in a general classroom setting. Therefore, it is more than likely that a general education teacher will be responsible for delivering instruction to students that display challenging behaviors associated with EBD. With that being said, it is vital for all teachers and educators to understand how to intervene as a way of addressing challenging behaviors using interventions that are evidence-based and effective as classroom management strategies.

Group contingencies can be utilized as part of a classroom management system that can assist with the reduction of challenging behaviors within the educational environment. Additionally, contingency contracting can be used to reduce classroom disruptions by outlining and specifying a contingent relationship that exists between the completion of a targeted behavior and that of the reward that is delivered once the targeted behavior is completed. Both of these interventions

are evidence-based strategies that can be used with a variety of behaviors and are fairly easy to implement for teachers or educators within a classroom setting.

Within this information, an (1) overview will be provided that delineates the relationship of group contingencies and contingency contracting to behavioral principles. Additionally, (2) guidelines for designing, implementing and evaluating group contingencies and contingency contracting will be addressed as well as the (3) rationale for and advantages of group contingencies and contingency contracting. Furthermore, the (4) application of group contingencies and contingency contracting within a classroom management system will be discussed.

Section 1: Overview of Group Contingencies

One evidence-based classroom management strategy that can be integrated within a general education classroom is the use of a group contingency. Group contingencies can be used as an effective intervention for reducing problematic behaviors. A group contingency involves the use of a reward that is designed to function as reinforcement. They are used to reinforce either one or more students that have met a predetermined goal (i.e., group, individual) by delivering them a reward (Hirsch et al., 2016). Group contingencies provide a consequence that is dependent on the demonstration of a behavior of one individual within the group (i.e., dependent), each individual within the group (i.e., independent), or every person in the group (i.e., interdependent) once a predetermined criterion has been met.

Advantages of Group Contingencies

There are several benefits and reasons for the use of a group contingency within an applied setting. One reason is that the use of a group contingency can be an efficient and effective intervention that can be used as a classroom management strategy. Group contingencies are used as an effective intervention for the reduction of challenging behaviors in both general and special education

environments. Additionally, by using group contingencies, teachers are more likely to focus and direct their attention on behaviors that are warranted and desired within an educational environment (Hirsch et al., 2016). A teacher may be more likely to provide attention for prosocial behaviors, such as students helping one another or taking turns during game time.

Secondly, a group contingency can be used by teachers when the situation does not allow for multiple individual student contingencies to either be implemented or monitored. When evaluating this reason, it may not be feasible to address a cohort of students that are exhibiting disruptive behavior by implementing multiple individual plans. Instead, it may be best to collectively address the exhibition of these student behaviors through the use of a group contingency intervention. In addition, a substitute teacher may find that the use of a group contingency plan is a sufficient alternative since they are unaware of each student's previous history with reinforcement. This would allow them to apply the group contingency across different behaviors, settings, and students within the educational environment.

As a result, interventions that include the use of group contingencies are considered to be economical as well as efficient. They require the use of less time by teachers and educators. Instead of a teacher or educator having to administer a consequence over and over again to each member within a group of students, the teacher or educator can apply only one consequence to all of the students within the classroom setting. This is particularly important as teachers and educators may have limited time and limited knowledge on how to best intervene when challenging behaviors are exhibited within the educational environment (Hirsch et al., 2016). This can aid in the reduction or use of less teachers and educators to implement the intervention overall.

Furthermore, a group contingency is able to be used in situations where a problem needs to come to a resolution fairly quickly. This could be in a situation when the disruptive behavior is serious and needs to be decreased rapidly.

Additionally, levels of appropriate behavior may need to be increased just as rapidly. In these situations, it may be best to integrate a group contingency within a classroom management strategy to quickly resolve challenging behaviors that are disruptive to the educational environment and the learning process for the individuals involved.

Group contingencies are also able to utilize the involvement of peer influence and peer monitoring in an effort to change behavior. It is important to know that peer pressure can result in negative effects and be detrimental to some people (Cooper et al., 2020). Some people can become scapegoats. Even though this has the potential to occur, these negative effects can be minimized. Negative and harmful outcomes can be minimized by designing the contingency components in a random manner.

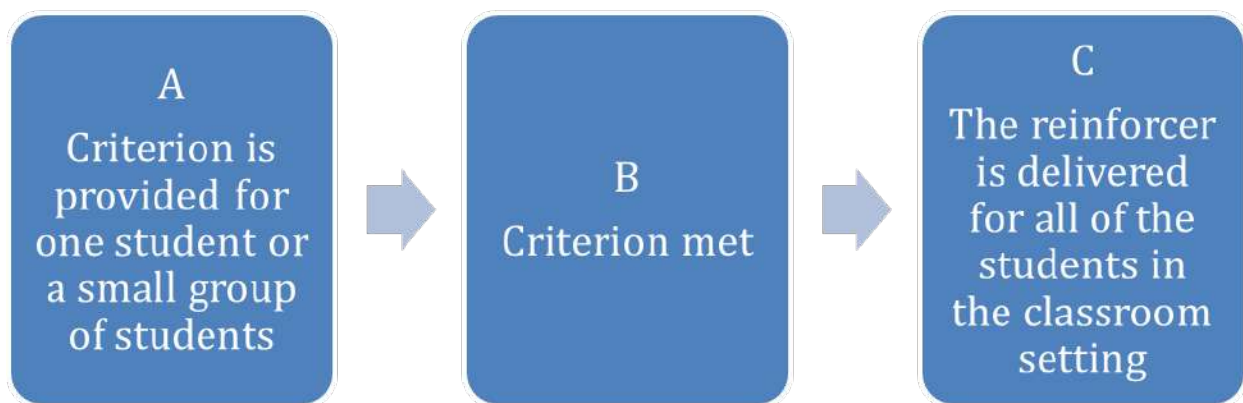
Lastly, teachers or educators can develop and implement group contingencies in a manner that encourages positive social interactions as well as positive behavioral supports within the educational environment. A teacher or educator may devise a group contingency to use with students that have been diagnosed with a disability. These same students may be integrated into a general education classroom setting where this group contingency could be designed in such a way that the entire class is able to receive a reward based on the targeted performance of at least one but maybe more of the students that are diagnosed with a disability. This design could allow for positive social interactions to occur among all of the students within that classroom setting.

Dependent Group Contingency

A dependent group contingency is inclusive of an intervention that is based on a criterion that is established based on the performance of either one student or a small group of students. Reinforcement is then provided to the entire group if either the one student or the small group of students demonstrates the desired behavior and meets the predetermined criterion. If the individual student or small group of students does not exhibit the desired behavior or meet the

predetermined criterion, then the reward is not provided to the group of students. This type of contingency may be more effective for students that are reinforced by the attention of others within their environment. Through use of this contingency, positive student interactions can be increased and behaviors that are considered disrespectful in the educational environment can be decreased (Hirsch et al., 2016). When a person or a small group of individuals is able to earn the reinforcer for the whole group, the contingency in effect is often referred to as the hero procedure.

Although there are several advantages to the use of dependent group contingencies, there are also several disadvantages that exist if the targeted student is unable to meet the predetermined criterion that were established. Peer pressure and coercive behaviors may be exhibited by other students which can result in negative effects for the targeted student. It has often been found that peers will attempt to punish the targeted student if the group is unable to obtain the reward (Hirsch et al., 2016). Therefore, it is important to continually monitor and evaluate the targeted student's behavior and the behavior of the peers to foster an environment that encourages and provides support if predetermined criteria are not met. Also, a targeted student may not respond well to this type of contingency intervention if they find that receiving attention from their peers or others within the educational environment is aversive.



Independent Group Contingency

An independent group contingency is an intervention that allows an individual student to have access to reinforcement based on the performance of an individual. The group contingency is provided to all of the students within the classroom setting. However, each student within a group needs to meet the predetermined criterion. Only those students within the classroom setting that meet the predetermined criterion are able to receive the reward.

Independent group contingencies are often paired with contingency contracting and token reinforcement programs. These types of interventions are usually used because they have reinforcement schedules that are independent of the performance of other students within the classroom setting. Through use of an independent group contingency, a student can increase their responsibility for their own behavior (Hirsch et al., 2016). Furthermore, this type of contingency can be used with other contingencies in a manner that will increase the effectiveness of the intervention. However, a disadvantage of independent group contingencies is that it does not take into consideration each student's individual preferences.



Interdependent Group Contingency

An interdependent group contingency is an intervention that provides reinforcement when the entire group of students is able to meet the predetermined criterion that was established (Hirsch et al., 2016). This means that each student and all of the students in the classroom setting have to meet the criterion prior to any student receiving the reinforcer for their performance.

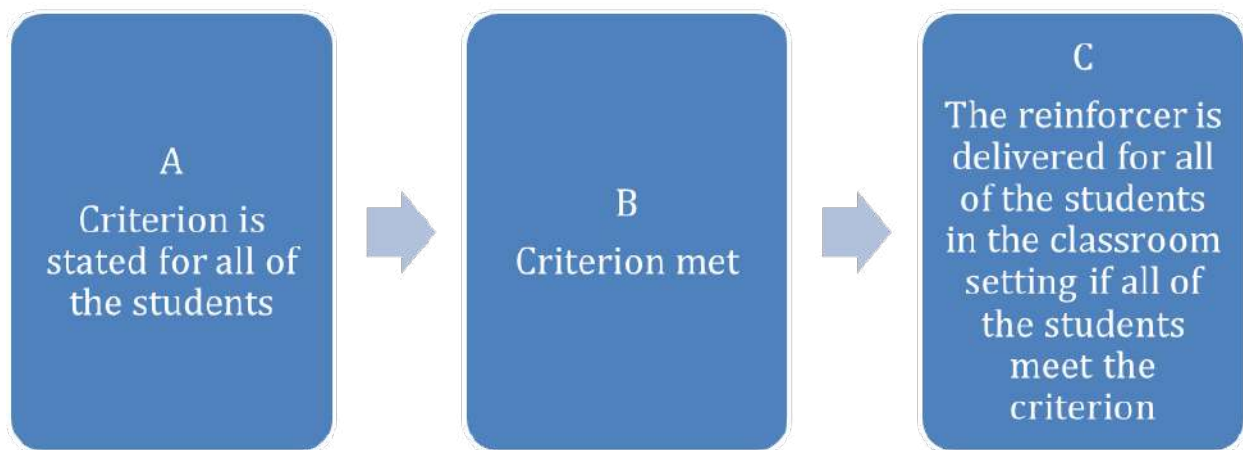
This type of contingency relies on the use of peer pressure and a sense of cohesiveness within the group to encourage behavior that is desired or targeted. A student's ability to gain access to reinforcement is dependent on their own behavior as well as the behavior that is exhibited by their peers. When comparing all three types of group contingencies, interdependent group contingencies have an advantage over dependent and independent group contingencies as they yoke students to work towards achieving a common goal, through use of peer pressure and the cohesiveness that is established within the group (Cooper et al., 2020).

However, the teacher or educator may need to continuously monitor the performance levels of the entire class as a way of determining the criterion level to avoid so that one or more students within the educational environment do not

sabotage the group from earning the reward. For example, a student may refuse to complete an activity in an effort to sabotage the group from earning their reward. Additionally, there may be some students within the classroom environment that decide to blame another student for not being able to meet the goal due to a deficit that has been exhibited (i.e., academic skill deficit). In this situation, scapegoating may be exhibited. Although there are several disadvantages to the implementation of interdependent group contingencies, these contingencies are effective as a classroom-based group contingency intervention.

Dependent and interdependent group contingencies can be made more effective by randomly arranging either some or all of the components that are involved in the contingency. This means that the behaviors, students and even the reinforcers that are used within the contingency can be randomly arranged.

An interdependent group contingency can be integrated into a classroom management strategy when all of the students in the classroom setting meet the criterion, when all of the students in the classroom setting achieve a mean group score or based on the results of the Good Behavior Game or the Good Student Game (Cooper et al., 2020). This type of contingency coincides with the term “all or none.” Within this contingency, either all of the students would earn the reinforcer that is selected or none of the students would earn it.



Section 1 Personal Reflection

Which type of group contingency have you come in contact with the most in your clinical experience? Is there a type of group contingency that you would prefer to integrate into a classroom management strategy?

Section 1 Key Words

Dependent group contingency - is inclusive of an intervention that is based on criterion that is established based on the performance of either one student or a small group of students. Reinforcement is then provided to the entire group if either the one student or the small group of students demonstrates the desired behavior and meets the predetermined criterion

Group contingency - a consequence is provided that is dependent on the demonstration of a behavior of one individual within the group (i.e., dependent), each individual within the group (i.e., independent), or every person in the group (i.e., interdependent) once a predetermined criterion has been met

Independent group contingency - an intervention that allows an individual student to have access to reinforcement based on the performance of an individual

Interdependent group contingency - an intervention that provides reinforcement when the entire group of students is able to meet the predetermined criterion that was established

Section 2: The Good Behavior Game and The Good Student Game

The use of group contingencies within a classroom management strategy can be fun to the students. There are a variety of ways that group contingencies can be implemented to help foster cohesiveness among students and focus teacher or educator attention on different behaviors. The Good Behavior Game and the Good Student Game are two options that can be considered with the educational environment to help modify behaviors in an effort to facilitate learning and positive behaviors.

The Good Behavior Game

The Good Behavior Game is known for being an interdependent group contingency. It can be used to address a multitude of classroom behaviors that are disruptive to the learning environment. The Good Behavior Game involves either a class or a group of students that are divided into two or more teams. Before the game begins, the teams of students are told that the team that has the least number of marks against them at the end of the game will receive a reward. All of the teams are also told that they are able to win a reward if they have fewer than a predetermined number of marks. This aspect of the game includes a differential reinforcement of low rates (DRL) schedule of reinforcement.

During the implementation of the Good Behavior Game, the teacher or educator will need to focus their attention on both observing and recording the instances of misbehavior that occur, knowing that if one or more teams have less than the criterion number of occurrences of misbehavior, then a reinforcer will need to be delivered. Within the Good Behavior Game, competition may be present within

the different teams, across the teams involved in the game, or against a predetermined criterion.

Often, when students are offered the opportunity to either continue playing the game or not, they prefer to continue playing the game within the classroom setting. It is thought that this could be due to a few different reasons. One reason, though, is that the reinforcers that are earned may act as social reinforcers for the students that are involved in the game. On the other hand, the marks that are made to denote misbehaviors during the implementation of the game may act as punishers.

The Good Student Game

The Good Student Game is similar to the Good Behavior Game in that it utilizes an interdependent group contingency. However, it also has an additional component that integrates the use of self-monitoring within the intervention. The Good Student Game is ideal to use when students are seated at their desk completing independent seatwork activities or assignments when challenging or disruptive behaviors may occur. With the Good Student Game, the teacher or educator will determine a targeted behavior that needs to be changed, goals and rewards will be delineated, and decide on whether or not group or individual monitoring, or even both, will need to occur.

The students that are involved in the implementation of the Good Student Game are trained through the use of a model-lead-test sequence. First, the students are divided into groups of four or five students. Then, the targeted behaviors for change are defined and both examples and nonexamples of the targeted behaviors are provided for those involved in the implementation. Next, the students practice the desired outcome while the teacher or educator supervises the practice sessions. Lastly, one or more of the students that have been involved in the practice sessions record either their own or that of the group's performance.

There are several similarities and differences that exist between the Good Behavior Game and the Good Student Game. In the information below, these details are delineated for you to provide a comparison of the two interventions (Cooper et al., 2020).

<u>Component</u>	<u>Good Behavior Game</u>	<u>Good Student Game</u>
<i>Organization</i>	The students play in teams.	The students play in teams or as individuals.
<i>Management</i>	The teacher or educator monitor and record the behavior	The students use self-monitoring and record their own behavior
<i>Target Behaviors</i>	Stated as either rule breaking or rule following	Stated as rule following
<i>Recording</i>	The teacher or educator records occurrences of rule-breaking behaviors when they occur.	The students record rule-following behaviors on a variable-interval schedule.
<i>System of Reinforcement</i>	Positive	Positive
<i>Criterion for reinforcement</i>	A set number of rule-breaking behaviors must not be exceeded.	Groups or individuals achieve or exceed a set percentage of rule-following behaviors.
<i>Delivery of reinforcement</i>	It is dependent on group performance.	It is dependent on either group or individual performance.
<i>Feedback</i>	The teacher or educator provide feedback at each occurrence of rule-breaking behavior.	The teacher or educator provide feedback at intervals. Praise and encouragement are delivered to reinforce positive behaviors during the game.

Section 2 Personal Reflection

Which group contingency game do you feel would be best to use in a classroom setting that you interact with? What are some of the targeted behaviors that you could address using one of these group contingency games?

Section 2 Key Words

Good Behavior Game - involves either a class or a group of students that are divided into two or more teams. Before the game begins, the teams of students are told that the team that has the least number of marks against them at the end of the game will receive a reward. All of the teams are also told that they are able to win a reward if they have fewer than a predetermined number of marks.

Good Student Game - is similar to the Good Behavior Game in that it utilizes an interdependent group contingency. However, it also has an additional component that integrates the use of self-monitoring within the intervention.

Section 3: Group Contingency Implementation Procedures

There are several steps that can be implemented in an effort to develop an integrated approach for setting up and evaluating the effectiveness of a group contingency. There are six steps that can be followed to assist with the development and implementation of a group contingency.

Step 1: Identify and Define the Targeted Behavior that is of Concern in the Environment

When determining the targeted behavior that is to be selected as the main focus for the group contingency intervention, it is important to identify either the goal or the priority within the classroom environment that is socially significant to the students and teachers for improving learning conditions (Hirsch et al., 2016). Once

this goal or priority has been identified, the behaviors that the students need to demonstrate and when these behaviors are to be demonstrated in order to meet this goal or priority should be defined. The targeted behavior that has been selected and is now the focus of behavior change should be precise, observable, and measurable (Hirsch et al., 2016). Additionally, the behavior should also be one that is fairly easy to change.

After time has been taken to identify and define the targeted behavior that is of concern within the educational environment, a determination should be made as to if all of the students within the classroom setting have the prerequisite skills required to perform the targeted behavior. Within the timeframe that the students are to exhibit the targeted behavior, each student should be able to perform the targeted behavior independently. It is vital and necessary that each student is able to demonstrate the targeted behavior because the group contingency provides momentum needed to increase the chances that the targeted behavior will occur (Hirsch et al., 2016). If a student is not able to exhibit the targeted behavior, then they will not receive reinforcement and a change will not occur within the educational environment.

Step 2: Record Baseline Data and Determine the Number of Students that Engage in the Targeted Behavior

Once the targeted behavior has been identified and defined, the frequency of the targeted behavior should be measured to determine baseline data. This step is necessary as it guides the decision-making process for selecting the appropriate group contingency and criterion level for performance. Within any behavior change intervention, baseline data allows one to set goals and criterion levels that are realistic and able to be attained. This also applied within the educational environment. A teacher or educator would be able to effectively determine goals and criterion levels that the students can attain when exhibiting the targeted behavior.

Once baseline data have been measured, it is important to determine the number of students that are engaging in the targeted behavior. The group contingency should address students that exhibit similar needs so that it can support the class in an efficient manner (Hirsch et al., 2016). Group contingencies can be an efficient method of managing student behavior within a classroom setting. However, the correct type of group contingency should be selected based on the needs of the students within the classroom and the goals and priorities that are determined. For example, if a dependent group contingency was selected to focus on the targeted behavior of a few students, this may be difficult to integrate within the classroom environment if the teacher or educator is attempting to individually evaluate the performance of the students. In this example, it would be more ideal to select a group contingency that focuses on the behavior that is exhibited by the whole group. If a teacher or educator has identified that more than 20% of the class is demonstrating challenging behavior, then it may be more efficient to explain the expectations of the classroom and the procedures to follow within the educational environment again to the students.

Step 3: Determine the Reinforcers for the Students

In order to design an effective and efficient intervention that includes a group contingency, the reward that is selected for the students should be both motivating and valuable to them. The value of a reinforcer can be determined through several methods. One method is to ask the students through a series of interviews or questions. Another method could offer different reward menus such as choice boards that have the students select the reward that they would like to earn. Observations during a student's free play could be conducted that allow for one to watch the items that a student engages or interacts with. Also, a formal reinforcer assessment could be conducted using the items that are available for selection.

No matter which method is used to determine the value of a reward to a student, it is important to know that an item that is reinforcing to a student can fluctuate,

and an item can lose its value based on when the reward is delivered, who delivers the reward, individuals that may be present when the reward is provided, or other competing reinforcers that could be present (Hirsch et al., 2016). For example, if a student determines that social interactions are highly valued as a reinforcer, this value could change based on other individuals that are around or present within the classroom setting. The value may also change depending on any experiences that have previously occurred with different individuals or the academic period within which the reward is able to be accessed. It is recommended that a teacher or educator select a reward that is a generalized conditioned reinforcer or reinforcer menus. This allows for the intervention to be based on an individualized contingency as well as increasing the power, flexibility, and applicability of the intervention (Cooper et al., 2020).

A formal assessment that could be conducted is the Classwide Reinforcer Survey (Park, 2016). This assessment contains a Likert-type rating scale that allows an individual to rate their preference on rewards that are available. Items that are included in the survey are delineated by the reinforcer category. These items are then compiled into a mean group response so that the value of different items can be determined based on specific categories. These categories include: interactions with peers, interactions with adults, activities that can be completed independently, or escaping work activities (Park, 2016). Additionally, the survey is divided into socially mediated and non-socially mediated categories. An item that is socially mediated could include a tangible item or activity that is able to be completed with either a peer or an adult. An item that is non-socially mediated could include an item or activity that is able to be completed alone without a peer or adult present. The removal of work activities is also included in this category.

By assessing the potential value that social interactions may have to the students within the classroom environment, this can aid the teachers or educators in choosing a group reinforcer that is valuable to the entire class.

Step 4: Choose and Develop the Group Contingency

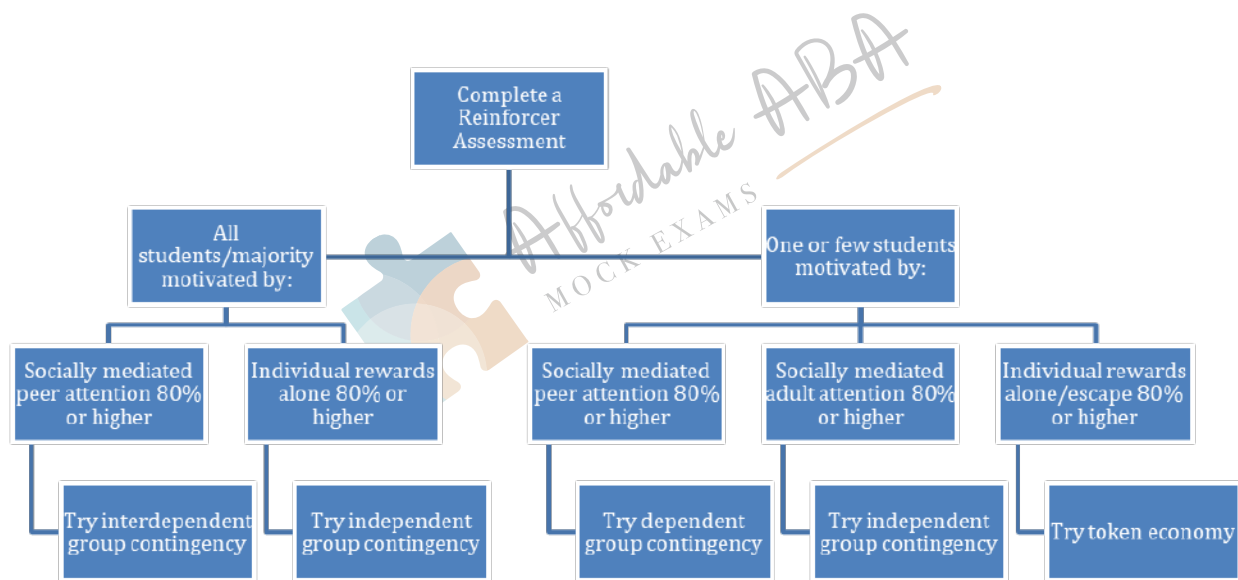
The data that were collected in the prior steps helped to determine which students were engaging in the targeted behavior as well as the potential reinforcers that were valuable to the students in the classroom setting. There are several factors that should be considered when determining the appropriate group contingency to use within the classroom management strategy.

For example, if a small percentage of the students within the classroom setting are exhibiting the targeted behavior, it may be wise to consider the use of a dependent group contingency; however, this should also be dependent on how the class valued the importance of social interaction (Hirsch et al., 2016). If the students ranked socially mediated rewards as a high reinforcer, then earning recognition from a peer within the dependent group contingency may act as a strong reinforcer for the student that is scapegoating. On the other hand, if an individual or group of students highly values non-socially mediated activities, then the social aspects that are delivered from earning a reinforcer for the class may not be appealing or motivating. Therefore, if a student is at risk of acting as the scapegoat, they may then knowingly sabotage the social reward due to this selected reinforcer having little value to them (Hirsch et al., 2016). With this example, an option that may be more feasible to consider could be an independent group contingency or possibly a different intervention that could be used to increase a behavior that is desired within the educational environment.

Either an independent or an interdependent group contingency should be considered when a targeted behavior is exhibited by a small group of students (i.e., 15 to 20% of the class) or a majority of the class (i.e., more than 50% of the class). When determining which group contingency to use, the decision should be based on the hypothesized function of the behavior and the motivating reinforcers that have been identified (Hirsch et al., 2016). For example, if a majority of the class prefers or ranks solo activities as highly preferred, then it may be more beneficial to select an independent group contingency over the other

options. When an independent group contingency is selected, students are able to access a reinforcer based on the performance that they demonstrate. On the other hand, if students rank socially mediated options as high, then an interdependent group contingency may be the best recommendation for an intervention. By using an interdependent group contingency, once all of the students meet the predetermined criterion, then everyone in the class is able to access the reinforcer selected. It is also important to know that a class could be divided into teams as a method of enhancing the intervention.

The figure below provides a decision-making process that can be used for teachers or educators when engaging in the decision of which group contingency format to integrate into their classroom management system.



Step 5: Time to Implement the Group Contingency

Once the determination has been made as to which group contingency will be implemented within the educational environment, the students that are in the classroom should be divided into groups and taught the targeted behavior that is desired. There are different group contingency programs available; however, the Classwide Function-Related Intervention Teams utilizes instructional posters that

define the expectations for those involved in the intervention. It might also be helpful to some students if examples and nonexamples of the targeted behavior or the behavior that is desired are provided for them. Also, during Step 5, it is vital to provide a rationale that explains why the targeted or desired behavior is significant within the classroom setting. Practice sessions should also be provided to the students that help them to fully understand not only the importance but also why this classroom management strategy is being implemented. Students should also be informed of the reinforcer that has been selected and that they will be able to gain access to dependent on the criterion that is established for the educational environment. The students should be able to explain how they will be able to gain access to the reinforcer as well as when they will be able to access it. Ultimately, the criterion that is established should be made clear to all individuals that are involved in the implementation of the classroom management strategy.

Furthermore, not only is implementation of the intervention important, but it is also vital to document whether or not the steps that are required to implement the group contingency are able to be completed. By assessing the fidelity of implementation of the intervention, this allows a significant question to be asked and answered. This question includes determining if the intervention is enabling the teacher or educator to do what they set out to do. There may be times during implementation of the classroom management strategy that the data indicates that the targeted behavior is not changing. While this may be an indication that something is being done incorrectly, it is important to take a moment to evaluate if the intervention that is being implemented is being ran as it was designed and with consistency among those that are implementing the intervention (Hirsch et al., 2016). There are different ways that treatment fidelity can be evaluated. One way is through use of a self-monitoring checklist. Individuals that are involved in the implementation of the intervention could be asked to complete a daily self-monitoring checklist on the different components that are involved with the group contingency. Research has shown that self-monitoring checklists may assist with maintaining the correct implementation of an intervention (Nelson et al., 2015).

Step 6: The Impact of the Group Contingency Should be Evaluated

As with any intervention that is used to change a behavior, the effectiveness of the intervention should be evaluated using an evidence-based decision-making process as a method of determining if a change in behavior has occurred. When looking back on the information that has already been provided, Steps 1-4 provided a delineation of how a teacher or educator could determine the behavior that is of concern within the educational environment that they wanted to focus on and how to effectively develop a group contingency plan that would result in a socially significant change in the behavior. As the classroom management strategy is designed and throughout the process of the intervention being implemented, data are being used throughout each part of the process to help increase the probability that the group contingency plan that was selected will be effective at changing the targeted behavior. However, it is important to not only focus on the design piece of the intervention but also the system that is used for data collection. While it is important to determine if “what” the teachers or educators are doing is correct, it is also vital to understand if what they did was also effective.

Therefore, in an effort to evaluate the effectiveness of a classroom management strategy, there are several questions that can be asked regarding the use of a group contingency plan (Hirsch et al., 2016):

- How will the behavior that is being targeted for change be tracked?
- What were the different levels of the behavior that is being targeted for change prior to the implementation of the group contingency?
- What were the different levels of the behavior that is being targeted for change after the implementation of the group contingency?
- Was a socially significant change in the targeted behavior demonstrated?

- If there was a socially significant change in the targeted behavior that was demonstrated, how will the group contingency plan be faded?
- If there was no socially significant change in the targeted behavior that was demonstrated, will the intervention be changed or will the intervention be continued as is?

The behavior that is being targeted for change can be tracked in a multitude of ways. These ways can also be simple so that they are not taxing on the teacher or educator that is collecting data. Various high-tech and low-tech options are available for use to track behavior data. An option that would be considered high-tech could be through the use of a smartphone or a tablet device. There are different tablet-based applications that are available for use and that are designed to track behavior data. These can be simple to use and may even only require the click of a button to record an occurrence of a targeted behavior. For example, some applications could be set up to track the frequency of a targeted behavior during a specified preset time period. The application could be turned on during this time period when the targeted behavior typically occurs, and a simple button tap could track the occurrence of the targeted behavior. Often, the benefits of using a high-tech option to track behavior data include an avenue that is easily organized, analyzed, and visually displayed. Several options that are considered high-tech include Class Dojo and Behavior Tracker Pro (Hirsch et al., 2016).

A targeted behavior could also be tracked by using various low-tech options. Low-tech options could include the use of a clipboard or paper and pencil to make a tally mark every time an occurrence of the targeted behavior is exhibited. Later, these tally marks which are considered data could be entered into a spreadsheet or placed on graph paper to indicate progress that is occurring on a daily basis. It is ideal if data could be tracked in such a way that allows the teachers or educators as well as the students to see their performance. This will assist with helping those involved in the classroom management strategy to determine and

assess the level of effectiveness that is occurring with the intervention and the progress that is occurring among the students.

Baseline data should be collected by tracking the targeted behavior prior to implementation of the group contingency plan. This tracking should last for at least three to five days. The data that are collected will later be referred to after the group contingency plan has been implemented in an effort to assess and evaluate whether or not the group contingency plan is having an effect on the targeted behavior. The data that are collected after the intervention has been in place is used to demonstrate the outcomes that are desired. If the data that are collected do not show a change, meaning that there is no change in the outcomes that are desired, these data are still valuable and provide important information to the effects of the intervention and its implementation. These data provide insight into the intervention for the teacher or the educator to let them know if a change needs to be made to the group contingency plan that is in place, if the students that are involved in the intervention should be retaught the behavior that is desired within the educational environment, or if the intervention is not being implemented the way that it has been designed to be implemented (i.e., fidelity). Prior to any changes being considered or implemented, it is best practice if a teacher or educator implements the intervention for a minimum of five days the way that the intervention has been designed (Hirsch et al., 2016).

After the data have been gathered and a change in the targeted behavior has occurred, it is necessary that the teacher or educator determine if the change in the targeted behavior is considered to be socially significant. In order for a change in behavior to be considered socially significant, the change in the behavior should impact the quality of life of those involved in the intervention in a positive way. This could mean that the change in behavior affects the students, teachers, and classroom in a positive manner. It is important to understand if the change in the behavior is considered socially significant, though. For example, if in a classroom environment, the targeted behavior of getting out of the seat at the desk occurs 15 times during baseline data collection and is reduced to occurring 14 times

during the intervention, a change in the targeted behavior did occur. However, this change is minor and the disruption that this targeted behavior is having on the classroom as a whole is still happening on a continual basis. Therefore, the outcome that is desired has not been met and this change is not considered to be a socially significant change in the targeted behavior. This may call for a change in the intervention to be considered or for the teacher or educator to evaluate the fidelity of the intervention.

After a socially significant change has been noted in the targeted behavior, the teacher or educator should decide on how they will eventually fade the use of the group contingency plan. On the other hand, if a socially significant change has not been noted in the targeted behavior, then the teacher or educator will need to determine if they would like to change anything regarding the intervention or what part of the intervention they would like to continue to implement. Fading is able to occur when there is a need to demonstrate the outcome that is desired at an incremental increase in an effort to still access the reinforcer. By increasing a student's targeted performance, this will allow a delay in the delivery of the reinforcer to occur and for fading to take place (Hirsch et al., 2016). If a socially significant change in the targeted behavior has not been demonstrated, then the teacher or educator will need to evaluate whether or not the students are demonstrating a deficit in a skill or a performance deficit. The demonstration of a skill deficit reveals that the student is not able to demonstrate the outcome that is desired because the knowledge to perform this skill does not exist within their being. Therefore, the teacher or educator will need to reteach the outcome that is desired by using instruction that is both explicit and direct. If the deficit exists within the student's performance of a skill, this should indicate to the teacher or educator that the student is able to perform the outcome that is desired, but they are not actually performing the behavior. This particular deficit demonstrates that there is a mismatch that is occurring between the motivation that exists with the student and/or the replacement behavior may not be meeting the function of the targeted behavior as effectively or efficiently.

Section 3 Personal Reflection

Identify a behavior that you would like to change through use of a group contingency. Which group contingency do you think would be best to use and why?

Section 3 Key Words

Baseline data - data that measures conditions prior to an intervention being implemented

Classwide Reinforcer Survey - This assessment contains a Likert-type rating scale that allows an individual to rate their preference on rewards that are available. Items that are included in the survey are delineated by the reinforcer category. These items are then compiled into a mean group response so that the value of different items can be determined based on specific categories.

Reinforcer - consequence that increases the likelihood that a targeted behavior or specified response will be exhibited

Self-monitoring - the ability to monitor and regulate self-presentations, emotions, and behaviors as they occur within the environment

Section 4: Contingency Contracting

Contingency contracting, which is also known as a behavioral contract, is a document that outlines and specifies the contingent relationship that exists between the completion of a targeted behavior and that of the reward that is delivered once the targeted behavior is completed. Within this document, the manner in which two or more people act toward one another is delineated. While verbal agreements may be similar to a contingency contract, a contingency contract is more involved and is specific in nature in how it is designed, implemented, and evaluated between the two parties of people that are involved

(Cooper et al., 2020). Furthermore, the simple act of signing a contract as well as having the contract visible during the execution period of the contract are the highlighted features of a contingency contract.

Contingency contracts were initially theoretically discussed and practically applied in the 1970s (Mruzek et al., 2007). As a result, contingency contracts were then used as an intervention regarding different clinical and educational problems that were noticed in a variety of settings and with different groups of individuals. Contingency contracts have been utilized within school systems in both general education and special education classrooms.

Contingency contracts have been used in a multitude of environments and with varying behaviors. They have been used to improve academic performance of students in an educational environment, weight control, and even athletic skills. They have also been used to decrease a student's tardiness, assist students during times of transition to a lesser restrictive environment, and address concerns with isolation (Mruzek et al., 2007). Contingency contracts are able to be used on their own or as a packaged treatment option that combines the use of two or more interventions for implementation at the same time. The use of contingency contracts may place fewer demands on a teacher or educator than other interventions used to reduce challenging behavior because a goal of a contingency contract is to gradually shift from being adult-driven to controlled by the student (Mruzek et al., 2007).

Components of a Contingency Contract

There are several components that are involved in order for a contingency contract to be effective at changing the behavior of the individuals involved in the intervention. Within every contingency contract, two main aspects exist which include the task and the reward. The contract delineates who is to perform the task and the reward that will be delivered contingent on the completion of the task. Therefore, it is vital that both the task and the reward are described in detail.

The task portion of a contingency contract contains four components. The first component describes the student that is involved who is responsible for performing the task that is outlined and who also will receive the reward once the task is completed. Next, the task or the behavior that the student is to perform is described in detail. Then, the timeframe in which the task should be completed by is provided. Lastly, how well the task is to be performed is detailed. This component is considered to be the most important aspect of the task description and the contingency contract in its entirety. This provides the student with the specifics of the task that are to be completed. Often, a series of steps or a checklist is provided for the student to assist with simplifying the contract and to make it clear to the individual the items that need to be completed. Other contracts have also included a photo of what the finalized task should look like. For example, if the task were to clean one's kitchen, then a photo could be provided that shows what a clean kitchen looks like. If there are any exceptions that should be outlined, they will need to be included in this section so that the task description is clear for the student that will be engaging in the task.

The reward component of the contingency contract will also need to be delineated as specific and clear as the task portion. It is often easy to be specific within the task component as teachers or educators typically know what they want a student to do or the behavior that they want to see exhibited. However, the reward component has been found to be a little trickier when attempting to be as specific as the task component. When specificity is not applied to the reward, problems can occur. For example, if someone defines a reward as "play a game together when I get a chance," this is vague and not explicit as to when the game will be played or for how long the game will be played for. This is not fair to the student that worked hard to complete the specific task outlined for them. Therefore, it is best practice to apply specificity to the reward component in a similar manner that it was applied to the task component of the contingency contract.

The first aspect of the reward component that should be specified is the person that will judge when the task is completed as well as deliver the reward. Next, the specific reward that will be earned should be outlined for the student. It should also include when the reward will be able to be received by the student that has earned the reward. Within a contingency contract, it is important to ensure that the reward is not delivered until after the task has been completed by the student. If a reward is only able to be accessed at a specific time (i.e., ice cream on Fridays), this should be specified within the contingency contract.

A third component of a contingency contract is a task record. This component is the only component that can be optional as being included on the document. However, if a teacher or educator chooses to include a task record, this place on the contract will serve two main purposes. The first purpose that this record of task completion serves is to align an opportunity for all parties that are involved in the contingency contract to review the contract on a regular basis. Additionally, if it has been established that there are to be a specific number of task completions required in order to earn a reward, then an indication (i.e., checkmark, smiley face, sticker) can be placed on the task record every time that the task is completed correctly. This will allow all of the individuals involved in the contingency contract to continue to be focused and diligent on completion of the specified task until it has been completed fully and the reward is able to be accessed.

Avenues for Applying a Contingency Contract

Classroom Environment

Teachers and educators have been able to employ contingency contracts within the educational environment to focus on aspects of discipline, performance, and different challenges that may occur within academics. Research has indicated that a contingency contract has been used with a student that exhibited behavior disorders to help them improve on their written mechanics that coincided with spelling and written language (Cooper et al., 2020; Newstrom et al., 1999). The

contingency contract was used to help the student improve their use of capitalization and punctuation marks as well as correctly spelling and writing a sentence. By having improved performance in these areas, the student was able to access free time on the computer. The intervention was implemented with the student during their language arts class, and they were reminded of the contract prior to each language arts class. Research indicated that the improvement in spelling and written language for this student also demonstrated carryover effects in other classes (Cooper et al., 2020; Newstrom et al., 1999).

In another example of a contingency contract being implemented in a classroom setting, a contingency contract was used to decrease disruptive behaviors exhibited by a student (Cooper et al., 2020; Wilkinson, 2003). In this example, disruptive behaviors included the student engaging in off task behaviors, refusal to complete work assignments or follow directions, fighting with other students in the class, and exhibiting temper tantrums. With the contingency contract that was developed, the student was able to earn a preferred reward and social praise from their teacher for three specific behaviors. These behaviors included an increase in time on task, having appropriate interactions with other students, and following the requests of the teacher. Research indicated that there was a decrease in the percentage of intervals that included disruptive behavior when the contingency contract was being implemented (Cooper et al., 2020; Wilkinson, 2003). The student's disruptive behaviors continued to remain low and decreased significantly when the behaviors were continued to be monitored during a four-week follow up period.

Additional research has indicated that the inclusion of goal setting within a contingency contract can be beneficial and have positive effects for students with emotional and behavioral problems (Cooper et al., 2020; Ruth, 1996). Within this research study, students were able to negotiate their contracts with their respective teachers. A component that included goal setting was added to each student's contract that referenced daily and weekly goals to achieve as well as the performance criterion needed to achieve these targeted goals. Results revealed

that 86% of the total goals outlined were achieved (Ruth, 1996). The researchers believed that by adding a goal setting component into the contingency contract, this zeroed in on the motivational aspect of the behavior contract so that there was maximum success for the intervention that was implemented.

Home Environment

Often, parents of students in the educational environment will reach out to teachers or educators to gain insight on how to help their child within the home environment, especially with homework completion. Contingency contracting can also be integrated into the home environment and has shown to have overall success with improving the performance of the child.

Research has shown that implementing contingency contracting with goal setting has been used to improve the homework performance of several students who previously had a history of poor homework completion (Cooper et al., 2020; Miller & Kelley, 1994). These students were also shown to be at risk for other academic problems such as exhibiting off task behavior and having errors on work that was already submitted. Prior to establishing the goal setting and contingency contract parameters, each parent of the identified students attended training on how to be able to set and negotiate goals as well as write a contingency contract with their child. Every week during the study, renegotiations occurred between the parent and their child for different tasks to be completed, rewards that were able to be accessed, and exceptions that could be made if an aspect of the contract was not able to be met. Results indicated that performance increased for all of the students involved in the study (Cooper et al., 2020; Miller & Kelley, 1994).

Principles Associated with Contingency Contracting

When evaluating the principles that are associated with the implementation and success of contingency contracting, most believe that the principles associated seem clear. It appears that a targeted behavior is being followed by a reward that is contingent on the completion of the specified behavior. This coincides with the

principle of positive reinforcement. However, in most of the contracts that are integrated into the educational environment, the reward that the student receives is too delayed to reinforce the targeted behavior directly. Most contingency contracts even specify a reward that typically would not function as a reinforcer for the targeted behavior even if it were to immediately follow the exhibition of that targeted behavior. Additionally, contingency contracting is not a simple process that has one behavior and one reinforcer for that behavior. It is a more complex, integrated treatment package that utilizes a multitude of behavior principles and procedures.

This leads to the discussion on how contingency contracts work exactly. It has been theorized that there are several behavior analytic principles, procedures, and other factors that can be applied to how a contingency contract works. At the forefront, reinforcement occurs for the student or individual involved. However, this application of reinforcement is not simple and does not occur in a direct manner as does other types of reinforcement. It is also thought that rule-governed behavior has some involvement in the efficacy of a contingency contract. Rule-governed behavior is behavior that is under the control of a specific rule that is verbally mediated. A contingency contract includes the use of a rule. A targeted behavior should occur that is then followed by a specified consequence. The contract then serves as a response prompt for the student or individual to demonstrate a targeted behavior which then enables access to a consequence that typically occurs too delayed to reinforce some behaviors. However, delayed consequences can often be used to help exert control over specific behaviors that are exhibited hours or possibly even days prior if they have been associated with and tied to a rule through the use of verbal behavior (Cooper et al., 2020). This may also work if the delayed consequence is associated with and tied to interim token reinforcers (i.e., smiley faces, stickers, checkmarks). The physical nature to which a student or individual can see a contract may also act as a response prompt for the student or individual to complete a targeted behavior.

Section 4 Personal Reflection

What are some behaviors that you could target for change through use of a contingency contract within a classroom environment? Do you feel that there are any behaviors that would be more difficult to implement a contingency contract with than others? Why?

Section 4 Key Words

Contingency contracting - also known as a behavioral contract, is a document that outlines and specifies the contingent relationship that exists between the completion of a targeted behavior and that of the reward that is delivered once the targeted behavior is completed.

Rule-governed behavior - behavior that is under the control of a specific rule that is verbally mediated.

Section 5: Development of a Contingency Contract

A contingency contract can be developed for a student by a teacher, a parent, or another person. Although contract development can be completed with minimal assistance from others, it is best practice to develop a contingency contract with all of the individuals that will be involved or have an active role with the individual and the contract. Including all parties will help to develop a contingency contract that is more effective for the student that is involved. The contract should be developed so that includes the delineation of the tasks and rewards involved as they are agreed upon by each member involved. There are at least five steps that should be considered when developing a contingency contract.

Step 1: Convene a Meeting

A meeting should be held that includes all parties, an entire class, or a group of people that are involved with the contracting process for the student. During this

meeting, all individuals that are involved can discuss how contingency contracts should work, how they are able to help the entire group to work together and get along better, and how contingency contracts are able to help a student meet their personal goals that they have outlined. The individuals that are involved in the development of the contingency contract should stress that they will actively be involved in all of the steps that lead up to as well as the implementation of the contingency contract that is developed. It is vital that through this process, the student is able to view contingency contracting as a behavior-exchange process that all individuals in the group will become part of, not something that is being forced on them by adults. Within the next steps, there are different list-making procedures that are outlined that provide a simple and thought-out approach for the determination of tasks and rewards for different contracts that are created. The development process typically takes 1-2 hours in duration for completion.

Step 2: List A Completion

Prior to the contract being developed and written, each member that is involved in the process of developing the contingency contract will complete three lists. These lists were created to help each person involved in the development process to determine the tasks that they are able to perform within the implementation of the contract as well as the tasks that they are already completing in an effort to help the group. This allows for attention that is positive in nature to be focused on the behaviors that are appropriate that each person is able to complete in a sufficient manner. When each person has been provided with List A to complete, each person should carefully list and describe the tasks as clearly and specifically as they possibly can. Once these lists have been completed, List A can be placed to the side and all members of the group involved in the development process can move on to the next step. If there is a member in the group that is unable to write, their list can be completed orally. Below is an example of List A (Cooper et al., 2020):

List A

Name: _____

THINGS I DO TO HELP MY CLASS HELP MY CLASS AND MYSELF

1. _____
1. _____

2. _____
2. _____

3. _____
3. _____

4. _____
4. _____

5. _____
5. _____

OTHER WAYS I COULD

Step 3: List B Completion

The completion of List B is ideally used to help the different group members to delineate possible tasks that could be included within the contingency contract for other group members as well as behaviors that are helpful that are currently being completed by those group members. The completion of List B is also used to denote the different areas where a disagreement may be found between the different group members when discussing and identifying whether or not various tasks are being completed in a proper and regular manner. Every member of the group should be provided with a List B to complete and asked to write their name in all three of the blanks toward the top of the form. These lists are then to be passed around the table so that each of the different group members are able to

write at least one behavior on each side of everyone else's list. The goal is for each group member to write on every List B that is available except for their own List B. Each group member should be required to list a minimum of one positive behavior on each group member's List B. Once these lists have been completed, then they can be set aside prior to implementing Step 4. Below is an example of List B (Cooper et al., 2020):

List B

Name: _____

THINGS _____ DOES TO OTHER WAYS _____

HELP THE CLASS

COULD HELP THE CLASS

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

Step 4: List C Completion

During the completion of List C, all group members are provided a sheet with lines that are numbered which are used to identify any potential rewards that they

would like to access for completing the contracted tasks that are outlined in the contingency contract. These lists of rewards should include everyday items that could be earned as well as special items or activities that may have been desired for a period of time. It is acceptable for the same reward to be listed by more than one group member. Once List C has been completed, each group member should collect their List A and B as well and read through all three of the lists, discussing any notations made that they may not understand. Below is an example of List C (Cooper et al., 2020):

List C

Name: _____

MY FAVORITE THINGS, ACTIVITIES, AND SPECIAL TREATS

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

Step 5: Write and Sign the Contingency Contract

The last step within the contingency contract development process starts by selecting a task for each group member's contract. There should be discussion among the different group members that occurs during this process in an effort to help each other select the task that can be viewed as the most important task that needs to be completed first. Each group member should write down the person that is going to perform the selected task, clearly describing what the task is that

is to be completed, how well the task should be completed, when the task should be completed by, and any exceptions that may occur during implementation of the contingency contract. Then, each group member should evaluate their List C and select a reward that is not considered excessive or insignificant, but rather fair for completion of the task that was selected for completion. Then, each group member will write down the person that will control the delivery of the reward, a clear description of what the reward is, when the reward should be delivered to the student/group member, and how much of the reward should be provided. The contract should then be written in its entirety and signed by all relevant parties.

Guidelines for Consideration when Implementing and Evaluating Contingency Contracts

There are several items that should be considered when making the determination if a contingency contract is appropriate as an intervention for the behavior that is targeted for change. The teacher or educator should evaluate the nature of the change in behavior, the participant's skills both verbally and conceptually, the student's relationship with the teacher/educator for whom the contract will be developed, and the resources that are available for use with the contingency contract. The behavior that is targeted for change should already be one that is in the student's repertoire and also under appropriate stimulus control in the environment in which the behavior is desired. If the behavior targeted for change is not in the student's repertoire, then other behavior change procedures should be implemented such as modeling or shaping. Contingency contracting is the most effective when it includes behaviors that produce permanent products or are able to be demonstrated in the presence of the person delivering the reward to the student.

There are various guidelines that should be considered when integrating contingency contracting into a classroom management strategy (Cooper et al., 2020; Dardig & Heward, 2016). The contract should be written in a fair, clear, and honest manner. There should be a fair relationship that exists between the

difficulty that coincides with task completion and the amount of reward that is able to be accessed contingent on task completion. The ultimate goal is for there to be a win-win outcome for both parties involved in the contract and not for one party to gain control over the other party. The contingency contract should also explicitly state the expectations of all members involved in the contract. When explicit expectations are delineated, it is more likely that performance will improve. Honesty within the contract exists when the reward is able to be delivered at the time and in the amount that was specified when the task has been completed as agreed upon. The reward is not delivered if the task is not completed in a manner other than what was agreed upon within the contract.

Additionally, the contingency contract should build in several layers of rewards that can be accessed contingent on task completion. For example, daily, weekly, and even bonus rewards can be provided for specific performance parameters that have been outlined. A response cost contingency should be considered at times. If the agreed upon task has not been completed by the student, then it may be appropriate to have “fines” outlined in the contract. A “fine” would act as a removal of rewards, as long as it is agreed upon and the parameters are outlined in the contract. The contract should also be posted in a place that is visible to the student. This allows all parties that are involved in the contingency contract to see the progress that has been attained toward achievement of the goals that have been delineated within the contract.

Furthermore, contingency contracting should be a pleasant experience for all of those that are involved in the process. This should not be an experience that determines the survival of the fittest or the best person at achieving an outcome. If a contingency contract produces a warranted change in the behavior that has been targeted but also causes other challenging behaviors or emotional responses within an individual, then it may be best to reconsider the use of the contingency contract as it is written. The student should be allowed to participate in the development process of the contingency contract as well as participating in regular progress checks so that situations similar to this can be avoided. A

contingency contract should be allowed to be renegotiated and changed when an individual that is involved in the contract is unhappy with a component of the contract. The tasks that have been outlined and the rewards that have been determined can both be reconsidered at any point during the existence of the contract.

It is important to understand that a contingency contract is not an end product. It is a method or intervention used to reach a predetermined goal. Once a student has been able to demonstrate that independent and proficient performance can be attained, then the contingency contract can be ended and terminated. Also, on the other hand, if any individuals involved in the contingency contract fail to consistently meet any of the terms that have been outlined in the contract, then the contingency contract should be terminated at this point as it is written. It is not appropriate to continue with the implementation of an intervention that the individuals involved are unable to achieve without either termination or a possible revision of the contingency contract being considered.

Section 5 Personal Reflection

Which step of contingency contract development do you think would be the most challenging to complete? Have you developed a contingency contract previously? If not, do you feel this would be a valuable intervention to employ with students in a classroom environment?

Section 5 Key Words

List A - a list to be completed by the individual as part of a contingency contract that includes a list of tasks that are able to be completed successfully as well as other tasks that could be implemented to help others

List B - a list to be completed by other members of the group and not the individual as part of a contingency contract to help the different group members delineate possible tasks that could be included within the contingency contract for

other group members as well as behaviors that are helpful that are currently being completed by those group members

List C - a list to be completed by all group members as part of a contingency contract which is used to identify any potential rewards that the group members would like to access for completing the contracted tasks that are outlined in the contingency contract



References

- Alwahbi, A., & Hua, Y. (2021). Using contingency contracting to promote social interactions among students with ASD and their peers. *Behavior Modification, 45*(5), 671–694. <https://doi.org/10.1177/0145445520901674>
- Bowman-Perrott, L., Burke, M. D., de Marin, S., Zhang, N., & Davis, H. (2015). A meta-analysis of single-case research on behavior contracts: Effects on behavioral and academic outcomes among children and youth. *Behavior modification, 39*(2), 247-269.
- Bowman-Perrott, L., Burke, M. D., Zaini, S., Zhang, N., & Vannest, K. (2016). Promoting positive behavior using the Good Behavior Game: A meta-analysis of single-case research. *Journal of Positive Behavior Interventions, 18*(3), 180-190.
- Cooper, J. O., Heron, T. E., & Heward, W. L. (2020). *Applied behavior analysis* (Third edition.). Pearson Education, Inc.
- Dardig, J. C., & Heward, W. L. (2016). *Sign here: A contracting book for children and their parents* (2nd ed.). Bucharest, Romania: ACTA.
- Denune, H., Hawkins, R., Donovan, L., Mccoy, D., Hall, L., & Moeder, A. (2015). Combining self-monitoring and an interdependent group contingency to improve the behavior of sixth graders with EBD. *Psychology in the Schools, 52*(6), 562-577.
- Deshais, M. A., Fisher, A. B., & Kahng, S. (2018). A preliminary investigation of a randomized dependent group contingency for hallway transitions. *Education and Treatment of Children, 41*(1), 49-64.
- Egger, J. O., Springer, D. G., & Gooding, L. F. (2015). The effect of behavioral contracting on preservice elementary teachers' performance achievement on the soprano recorder. *Journal of Music Teacher Education, 24*(2), 74-87. <https://doi.org/10.1177/1057083713512318>

- Ferneza, P., Jabot, M., & Maheady, L. (2013). The effects of group contingencies with randomized components on the homework accuracy of an 11th-and 12th-grade general science class. *Journal of Evidence-Based Practices for Schools, 13*(2), 100-119.
- Grunke, M. (2019). The effects of contingency contracts on the correct use of punctuation marks in elementary students with learning disabilities. *Insights on Learning Disabilities, 16*(1), 47-57.
- Hawkins, R. O., Collins, T. A., Haas Ramirez, L., Murphy, J. M., & Ritter, C. (2020). Examining the generalization of a combined independent and interdependent group contingency for students with emotional and behavioral disorders. *Behavioral Disorders, 45*(4), 238-251.
- Hirsch, S. E., MacSuga-Gage, A., Park, K., & Dillon, S. (2016). A Road Map to Systemically Setting up a Group Contingency. *Beyond Behavior, 25*(2), 21-29. <https://doi.org/10.1177/107429561602500204>
- Little, S. G., Akin-Little, A., & O'Neill, K. (2015). Group contingency interventions with children—1980-2010: A meta-analysis. *Behavior Modification, 39*(2), 322-341.
- Majeika, C. E., Wilkinson, S., & Kumm, S. (2020). Supporting student behavior through behavioral contracting. *Teaching Exceptional Children, 53*(2), 132-139. <https://doi.org/10.1177/0040059920952475>
- Miller, D. L., & Kelley, M. L. (1994). The use of goal setting and contingency contracting for improving children's homework performance. *Journal of Applied Behavior Analysis, 27*, 73-84.
- Mruzek, D. W., Cohen, C., & Smith, T. (2007). Contingency contracting with students with autism spectrum disorders in a public school setting. *Journal of Developmental and Physical Disabilities, 19*(2), 103-114. <https://doi.org/10.1007/s10882-007-9036-x>

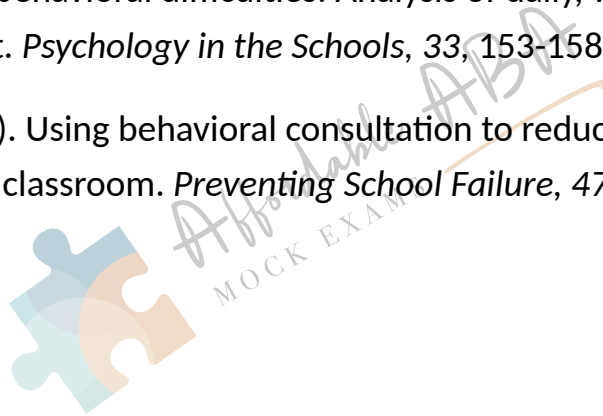
Nelson, J. R., Oliver, R. M., Herbert, M. A., & Bohaty, J. (2015). Use of self-monitoring to maintain program fidelity of multi-tiered interventions. *Remedial and Special Education, 36*, 14-19.

Newstrom, J., McLaughlin, T. F., & Sweeney, W. J. (1999). The effects of contingency contracting to improve the mechanics of written language with a middle school student with behavior disorders. *Child & Family Behavior Therapy, 21*(1), 39-48.

Park, K. L. (2016). Integrating student preferences with a classwide reinforcer survey. *Manuscript in preparation*.

Ruth, W. J., (1996). Goal setting and behavioral contracting for students with emotional and behavioral difficulties: Analysis of daily, weekly, and total goal attainment. *Psychology in the Schools, 33*, 153-158.

Wilkinson, L. A. (2003). Using behavioral consultation to reduce challenging behavior in the classroom. *Preventing School Failure, 47*(3), 100-105.





The material contained herein was created by EdCompass, LLC ("EdCompass") for the purpose of preparing users for course examinations on websites owned by EdCompass, and is intended for use only by users for those exams. The material is owned or licensed by EdCompass and is protected under the copyright laws of the United States and under applicable international treaties and conventions. Copyright 2023 EdCompass. All rights reserved. Any reproduction, retransmission, or republication of all or part of this material is expressly prohibited, unless specifically authorized by EdCompass in writing.