Intervention Tool: Choral Responding

Description: One of the strongest factors associated with academic success is the amount of time students spend actively engaged in learning. However, when a classroom teacher poses a question directed to the entire class (e.g., "Who knows what letter comes after 'k'?") only one student answers while the rest of the class waits. In choral responding, the class is taught to respond to a question in unison and as a result, there is an increase in the amount of active engagement of all students in class including children with autism.

Level of Responsibility: Classroom

Reference: Haydon, T., Mancil, G.R., & Van Loan, C. (2009). Using opportunities to respond in a general education classroom: A case study. *Education and Treatment of Children, 32*, 267-278.

Procedure:

1. Select the topic that you want to teach using choral responding. The topic should have a series of concepts that you will model.
2. Start with a simple instruction for the class to attend, (e.g., "Listen")
3. Provide a simple model of the concept being taught (e.g., "Ottawa is the capital of Canada") (e.g., "This letter makes a 'mmm' sound").
4. Ask a question to elicit the choral response (e.g., "What is the capital of Canada?").
5. Give an instruction that prepares the class to respond in unison (e.g., "Everybody").
6. Use a sweeping motion of one hand with the index finger pointed to touch the item being taught. For instance, when sounding out letters the letter is written on the blackboard. When your finger touches the letter on the board, the class then responds in unison.
7. If the item being taught does not require a visual model, children will learn to respond to your finger when touching an open palm of the other hand which signals the class to respond in unison. For instance, if the class is being taught to indicate what number comes after four without a model being presented, the teacher would give a general instruction (e.g., "Class, listen".), then an eliciting question (e.g., "What number comes after four?"), then a ready instruction (e.g., "Ready.") and then a sweeping motion with the teacher's index finger touching the open palm of the other hand. At the point of the finger touching the palm, the class is expected to respond in unison.
8. The class needs to be taught to respond in unison. Start with learning material the class already knows to teach them to respond to a ready instruction and a sweeping motion. Continue until the entire class is able to respond reliably in unison to a question that everybody is able to answer.
9. It is important that everybody is responding and responding in unison. Correct individual students who do not make a clean choral response on cue. This correction would consist of calling on the students individually to respond.
10. When teaching a concept, the following is the recommended sequence of teacher instruction:

a. Choral response (e.g., “Class listen”, pause, “What is the capital of Canada”, pause, make a sweeping motion to the printed answer on the board.)
b. A second identical choral response.
c. Class-directed question (e.g., “Who knows the capital of Canada?”).
d. A second class-directed question.
e. An individual-directed question (e.g., “Raymond, what is the capital of Canada?”).

☐ **How To Evaluate:** Before starting choral responding, pick a brief lesson that you conduct and keep track of response opportunities for the class over a ten-minute period. Response opportunities would be the total number of opportunities for students to respond to posed questions multiplied by the number of students who are called upon to respond. In other words, a class-directed question would result in one student responding. An individual-directed question would result in one student responding. A choral response would result in the entire class responding. Tally up the total number of response opportunities for the entire class. Do this on two occasions prior to the introduction of choral responding and then compare the results after the introduction of choral responding.

Checklist

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Intervention Tool: Response Cards

Description: Such as choral responding is used to increase the active participation of all students during a lesson when they respond verbally in unison, response cards are used for a class to write an answer in unison.

Level of Responsibility: Classroom

Reference: Lambert, M.C., Cartledge, G., Heward, W.L., & Lo, Y. (2006). Effects of response cards on disruptive behaviour and academic responding during math lessons by fourth-grade urban students. *Journal of Positive Behavior Interventions*, *8*, 88-99.

Materials: small white boards with erasable markers, or sheets of paper

Procedure:

1. Each student is given a white board slate and an erasable marker or a scrap sheet of paper.
2. During a lesson (e.g., math lesson on multiplication), the teacher would ask a question and students would be expected to write their answer on the response card.
3. After a sufficient amount of time for the students to answer, the teacher instructs the class to put their "response cards up".
4. Each student is expected to hold their response card over his or her head with the answer pointed towards the teacher.
5. The teacher scans the answers and all students are correct, praises the class and asked the students to erase their answers.
6. If more than one-fourth of the class got the wrong answer the teacher would explain how to solve the problem and then directs them to correct their answers. The teacher presents the same problem again for the class to practice their answers.
7. If only a few of the class answered incorrectly, the teacher would give the correct answer and ask those students to correct their responses and then moves on to the next question.

How To Evaluate: Before starting response cards, pick a brief lesson that you conduct and keep track of response opportunities for the class over a ten-minute period. Response opportunities would be the total number of opportunities for students to respond to posed questions multiplied by the number of students who are called upon to respond. In other words, a class-directed question would result in one student responding. An individual-directed question would result in one student responding. A choral response or response card response would result in the entire class responding. Tally up the total number of response opportunities for the entire class. Do this on two occasions prior to the introduction of response cards and then compare the results after the introduction of response cards.

Checklist

IT 3

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ABA Procedure: Class Contingency

Purpose: A class contingency consists of awarding points or tokens to the entire class for some predetermined performance of the entire class (e.g., lining up quietly, everyone attending to the teacher during lessons. The points/tokens are saved up for a class reward (e.g., pizza party, movie). In this way, the child with autism is not the only individual who may be on a reinforcement system.

Level of Responsibility: Classroom

Reference: Fabiano, G.A., Pelham, W., Karmazin, K., Kreher, J., Panahjon, C. & Carlson, C. (2008). A group contingency program to improve the behaviour of elementary school students in a cafeteria. *Behavior Modification, 32*, 121-132.

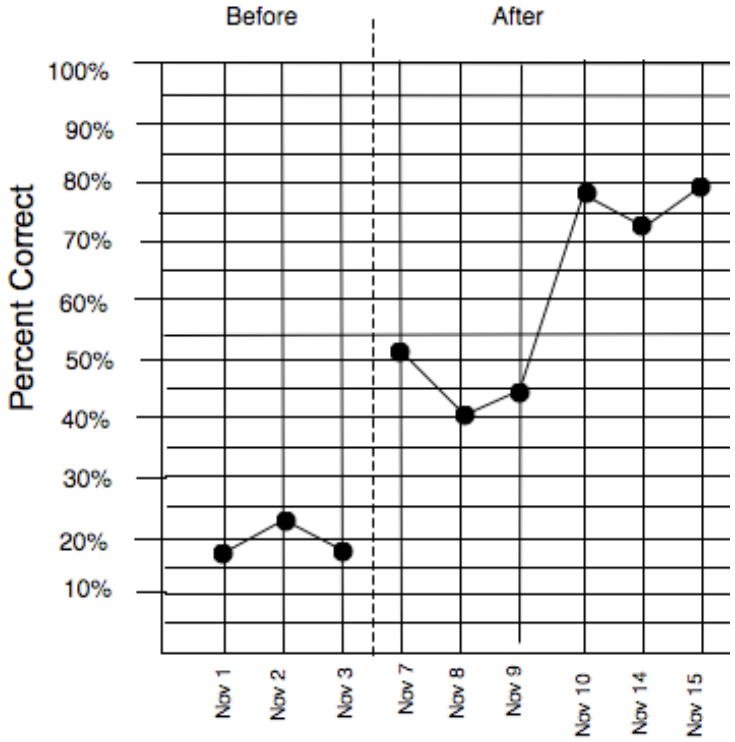
Procedure:

1. Select a target behaviour or response of the class that you would like to improve (e.g., less disruptive behaviours, assignments completed on time),
2. Select a backup reinforcer that the class will work for that would be received by everyone at the same time such as a pizza party, a movie, etc.
3. Determine in what situations, how often, and how you will have the class earn the reinforcement (e.g., For improving class disruptive behaviour, a timer is set to sound every ten minutes and at that instant, a point or token is earned by the class if everybody is working and on-task).
4. Give the class ample opportunities to receive feedback on the skills being practiced. For example, if the target was to reduce class disruptive behaviour, a timer is set to sound every ten minutes and the behaviour of the class is determined at that instant. At the sound of the timer, the teacher would award the class a point if they were all meeting the expectation.
5. Prior to starting this, the teacher would have a discussion with the entire class indicating expectations and writing down rule for the desired class behaviour.
6. Do not set the level that the class has to achieve too high. It is important to have the class be successful and then build up the expectations from there.
7. During each occasion when the class has an opportunity to earn a token or point towards the class reward, give a brief description of what you saw that resulted in the class earning a point or token (e.g., “Wow, everybody was working hard. Way to go" or "I am sorry but two of you were talking. The class will not earn a point”.).

How To Evaluate:

1. Before you start a class contingency, you should take about two days of baseline data on what the class is doing (e.g., Measure whether the entire class is working every 10 minutes during seatwork in class). In each of those time intervals, record what the class as a whole is doing. At the end of 20 minutes you can tally up the percent of occasions in which the class was on-task. Do this for approximately three days prior to starting the group contingency. Continue to

keep the data and then graph as illustrated below. You should see an increase in the target behaviour for the entire class.



Example: Mrs. Grey wanted to get more work out of her fourth-grade students. She created 1" x 6" strips of paper in red or green. On the red strips of paper was one of several praise statements about a student's schoolwork (e.g., "You are working hard"; "Great working"). The green slips of paper contained various praise statements about a child's conduct in the classroom (e.g., "I like the way you are behaving", "Great paying attention"). Mrs. Grey would carry these strips of paper during the day and without fanfare gives them to individual students when the teacher noticed good behaviour and/or good working. Just before lunch break and just before home dismissal, each student who received one or more strips of paper from the teacher wrote his or her name on the paper strip and then glued it into a circle linking to a "chain" of other strips earned by students in the classroom. The students had previously selected a reward for the entire class such as watching a video tape that would be received when the chain of paper strips reached from the back of the classroom to the front. Tokens were rewarded to individual students based on their individual performance but the payoff of the backup reinforcer was delivered to the entire class.

hecklist

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IT 4

Intervention Tool: Embedded Instruction

Description: Embedded reinforcement provides practice of students' individual objectives embedded into the routines of the general education classroom such as during transitions and during lessons.

Level of Responsibility: School

Reference: Polychronis, S. C., McDonnell, J., Johnson, J. W., & Jameson, M. (2004). A comparison of two-trial distribution schedules in embedded instruction. *Focus on Autism and Other Developmental Disabilities*, *190,* 140-151.

Procedures:

1. Pick up to three objectives (e.g., vocabulary words, multiplication facts, telling time) that can be taught to a student based on the student's IEP.
2. For each objective, select a set of five items (e.g., five vocabulary words, five clock faces to fifteen minutes) that would be used for instruction. Items could be selected by examining the curriculum and/or by keeping track of errors the student makes in the course of a school day.
3. Pick a series of five to ten minute periods when you can practice each of the subject skill areas with the student about 3 times a day. Develop a plan when this is going to occur throughout the week. A planner such as that shown on the next page can be used.
4. Teaching should consist of:
   a) Presenting the stimulus (clock face) if applicable, and the instruction (e.g., "What time?" "Spell cat.").
   b) Immediately (zero-second constant time delay) model the correct response ("Two fifteen").
   c) Reinforce the student for repeating the correct response.
   d) If the student does not respond within 3 seconds or answers incorrectly, ensure that the student is attending (e.g., touch the student lightly), point out the stimulus that is applicable, model the correct response and then re-administer the instruction to the child.
   e) Move on to the next item to be taught in a set of five and teach in the same manner.
   f) Once the child is able to correctly respond to an item presented using a zero second constant time delay prompt twice in a row, then move to a three-second constant time delay prompt for that item. Here, present the stimulus if applicable, the instruction, and then wait three seconds for the child to respond. If the child does not respond correctly within three seconds then use the same correction procedure as before. If the child does respond correctly provide reinforcement.
   g) Move on to a new set of five items when the child correctly answers all five items twice in a row.
   h) Continue teaching the set of five until five or ten minutes are up.
   i) Record the results of each set of five items presented on the same planning sheet as described above.

☐ j) After the child learns an initial set of five items, form new sets of five items by combing three new items and two review items taken from what the child has already mastered.

WEEKLY PLANNER

Week of: November 22

Brian	1	2	3
Objective 1	B1: Brian will give the definitions of each of five vocabulary words on three consecutive occasions	B2: Brian will complete sheets of five subtraction problems from 20 (e.g., 18 - 12 =) without prompts	B3: Brian will write complete sentences that contain a subject, verb, and object.

Time		Monday	Tuesday	Wednesday	Thursday	Friday
8:40	Entry bell	B1: 3/5	B1:__	B1:__	B1:__	B1:__
8:45 - 9:05	Art					
9:05 - 9:45	Language: Writing	B3: 3/3	B3:__	B3:__	B3:__	B3:__
9:45 - 10:00	Recess (15 minutes)	B1: 4/5	B1:__	B1:__	B1:__	B1:__
10:00 - 10:40	Social Studies	B3: 3/3	B3:__	B3:__	B3:__	B3:__
10:40 - 11:20	Math	B2: 4/5	B2:__	B2:__	B2:__	B2:__
11:20 - 12:20	Lunch	B2: 3/5	B2:__	B2:__	B2:__	B2:__
12:25 - 1:05	Phys Ed					
1:05 - 1:45	Language: Reading	B3: 3/3	B3:__	B3:__	B3:__	B3:__
1:45 - 1:55	Recess (10 minutes)	B1: 4/5	B1:__	B1:__	B1:__	B1:__
1:55 - 2:35	Science		B3:__	B3:__	B3:__	B3:__
1:55 - 2:35	Music					
2:35 - 3:15	Math	B2: 5/5	B2:__	B2:__	B2:__	B2:__
3:15	Dismissal					

Example: Noah is in grade three and has three objectives: opposites, irregular plurals and vocabulary words. Three sets, of five items in each set to be taught were

developed by keeping a log of the errors that Noah makes. A plan is formulated when the embedded instruction is to take place during the school day with a goal of having three practices for each of the three objectives. A series of five to ten minutes are set aside for practice each day. Each new item is presented using zero-second constant time delay prompt until Noah answers that item correctly on two occasions and then the instruction moves to a three second constant time delay prompt. Training continues until Noah is able to correctly answer all five items in a set twice in a row and then new items are added. A new set of five items composed of three new items plus two review items then are introduced.

Checklist

IT 5

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Intervention Tool: Priming

Description: Priming consists of providing practice for a child with autism in academic subject areas, in completing classroom routines or in some other area prior to those actual events occurring in the classroom.

Reference: Koegel, L.K., Koegel, R.L., Frea, W., & Green-Hopkins, I. (2003). Priming as a method of coordinating educational services for students with autism. *Language, Speech, and Hearing Services in School, 34,* 228-235.

Level of Responsibility: School

Procedure: Two types of priming situations will be described. One is priming of academic work and the second is priming of classroom routines. Priming can be conducted at home by parents, or, a tutor provided by the parents. It is also possible for priming to be conducted in a separate room in the school provided by the education assistant or some other individual. Priming needs to be coordinated by the classroom teacher so that the priming content is driven by what would be covered in the classroom.

<u>Priming of Academic Work</u>

1. Pick academic work being covered in the classroom in which the child needs assistance (e.g., spelling, reading a story and answering questions, etc.).
2. Provide the person doing the priming with a copy of what work is to be covered in the classroom in the selected academic area.
3. Priming sessions should be conducted as close as possible in time to the classroom event to which the priming is hoped to affect and no further away than 24 hours. In the case of home-based priming, priming would happen the evening before at home. In the case of school priming, priming would be conducted in a separate room of the school sometime prior to the classroom event occurring, up to 24 hours before.
4. Tutoring in the academic subject should follow the methodology described under embedded instruction. This methodology is:

- Teaching content in sets of 5 items
- An item is initially presented and then there is a zero second constant time delay prompt (e.g., “what is the capital of Canada?” pause “Ottawa”). The child is expected to simply imitate the model
- Reinforcement is used for correct responding
- Errors are followed by presenting the instruction and immediately modeling and then asking the child to imitate that model
- Once an item is correctly responded to after 2 consecutive presentations at the zero second time delay prompt, the item then is taught using a three-second contact time delay prompt (the item is presented and the instructor waits three seconds for the child to respond). Correct responses are reinforced and errors are dealt with error correction strategies as before

5. Teaching continues until the entire set is correctly answered on two consecutive presentations
- New sets of 5 are constructed using 2 review and 3 new items

6. You will need to demonstrate the teaching procedure to the individual providing the priming, which would consist of describing it, modeling it, have the individual practice it with feedback and corrections.
7. A communication book would need to be set up that describes the academic work that would be presented week-by-week to be primed at home or in another room at the school. The communication book would also be in a location in which the person providing the priming would describe how well things are going.

Evaluation: Priming would be typically conducted two or three times a week. Prior to starting priming, keep track of the child's performance in the subject area before priming is introduced and then continue keeping results for at least two weeks afterwards.

Example: Bob struggles in his grade 2 class with the spelling words being covered each week. Each week 10 new words are introduced and priming is used to pre-expose the child to those spelling words. Using a communication book, the teacher provides the parents with a list of the 10 words to be taught each week and the parent teaches those words to the child with autism using the instructional methodology described in this section. A spelling test is held in the classroom every Friday and the teacher is able to keep track of the child's correct performance using priming.

Priming of Classroom Routine

Priming can also be used to improve classroom routines followed by children with autism. Sometimes children with autism have difficulty raising their hands to answer questions or are not able to respond to lessons that are presented.

1. As with priming of academic work, priming of classroom routines can be done either at home or in another room at the school.
2. Define what you are attempting to prime (e.g., raising hand, answering questions during calendar time) so that the situation of priming is clearly described.
3. As before, you will need to set up the priming conditions and provide some instruction for the person providing the priming.
4. Priming typically consists of a simulation of the classroom routine that would be held for the child to practice. This simulation may be through role-playing and/or through the use of video of the routine from the child's perspective. For example, if one wanted to prime a child raising his/her hand to answer questions in class, a video may be made from the child's perspective of the teacher asking questions. No other students are shown in the video. At home, the child can view the video as if he or she is in class and raise their hand to answer with reinforcement and prompting from behind.

5. Priming of routines may also be done by role-play of the simulation of the classroom. The difficulty is that there would only be one child with the tutor and making it somewhat difficult to prime a classroom. This may be simulated by having other children present, or the use of stuffed animals that one pretends can answer questions as well.
6. Reinforcement is delivered for each correct response.
7. Error correction consists of getting the child's attention, modeling the desired response, and then asking the child to attempt it again. Over time, the amount of prompting is faded through waiting a little bit longer, reducing the amount of prompt delivered and gradually having the instructor increase the amount of physical distance from the child.

Evaluation: Priming can be evaluated by keeping track of the number of correct responses the child makes prior to priming being introduced. For example, if one is going to prime a child to raise her/his hand to answer questions, one would track how many opportunities does the child have to raise his/her hand to answer and from this number, how many times did the child actually raise her/his hand. This measure would then be done prior to and after the introduction of priming.

Example: Christy is a 5-year-old girl who has difficulty following the morning exercise in kindergarten. The calendar time is an occasion where every day there is discussion over what month it is, what the weather is, the day of the week, etc. To assist Christy, a video was made of the teacher conducting the calendar time routine and at home Christy practiced this by watching the video of the presentation. At home, Christy was expected to raise her hand to answer when the videotape of the teacher asking a question was presented. The amount or prompting was then systematically faded out over time.

ABA Procedure: Prompt Fading

Description: Prompting fading consists of the systematic reduction and eventual removal of prompts.

Reference: Riesen, B., MacDonald, J., Johnson, J., Polychronis, S., & Jameson, M. (2003). A comparison of constant time delay and simultaneous prompting within embedded instruction in general education classes with students with moderate to severe disabilities. *Journal of Behavioral Education, 12,* 241-259.

Level of Responsibility: Classroom

1. Prompt fading is absolutely critical. One does not want to have a situation where the child becomes dependent upon the assistance provided to him or her and is unable to complete a task without it.
2. Prompting is faded by systematically reducing the prompt along three dimensions: a) the type of prompt (e.g., physical, verbal, visual) given, b) the amount of the prompt given (e.g., a partial physical rather than a full physical prompt), c) delay prior to giving the prompt; and, d) the distance the prompter is from the child.
3. A plan should be in place how to fade prompts in each of the areas the prompts are provided. The table below shows an example of a plan to fade prompts along the three dimension discussed. The checkmark indicates the type and level of prompting that should be used during literacy and numeracy lessons.

An Example of Reduction In The Delivery of Prompting

Date	Type of Prompt	Amount of Prompt	Delay of Prompt	Position
9:00 – 9:35 Literacy	Physical √ Verbal Gestural Visual	Full √ Partial – moderate Partial – minimal None	0 sec √ 2 sec 4 sec 10 sec	√ Beside Behind 3 m away 10 m away
9:35 – 10:15 Numeracy	Physical Verbal Gestural √ Visual	Full Partial – moderate √ Partial – minimal None	0 sec 2 sec √ 4 sec 10 sec	Beside Behind √ 3 m away 10 m away

4. The checkmark in each box depicts the level of prompting that was planned to be implemented during each of the two situations listed.
5. As the responses of the child with autism show that he or she is coping, the prompting is reduced along the four dimensions.

E**valuation:** The amount of prompts used can be monitored by coding the amount of prompt needed in a particular subject area in the table below

Type: Ve = verbal, Vi = visual, G = gestural, P = physical,
Amount = 5 = full, 4 = less than full; 3 = partial, 2 = minimum, 1= none
Delay in seconds
Location of prompter = 5 = beside, 4 = right behind, 3 = 1 metre away, 4 = 3 metres away, 5 = across the room

Subject Area _____

Date	Type	Amount of Prompt	Delay of Prompt	Location of Prompter
	Ve Vi G P	5 4 3 2 1	0 2 4 10	5 4 3 2 1
	Ve Vi G P	5 4 3 2 1	0 2 4 10	5 4 3 2 1
	Ve Vi G P	5 4 3 2 1	0 2 4 10	5 4 3 2 1
	Ve Vi G P	5 4 3 2 1	0 2 4 10	5 4 3 2 1
	Ve Vi G P	5 4 3 2 1	0 2 4 10	5 4 3 2 1

Checklist

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IT 11

ABA Procedure: Individual Reinforcement System

Description: An individual reinforcement system consists of delivering positive reinforcement to increase the desired behaviour or correct response of an individual student.

Reference: McLaughlin, T.F & Malaby, J.E. (1974). The utilization of an individual contingency program to control assignment completion in a token classroom: A case study. *Psychology in the Schools, 11,* 191 – 194.

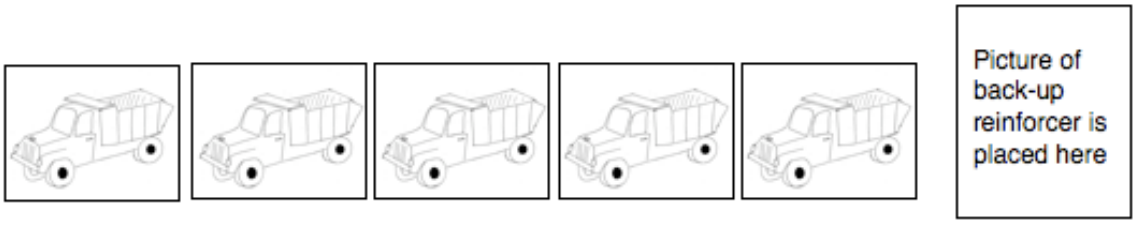
Level of Responsibility: School

Procedure:

☐ 1. Select potential back-up reinforcers to use with the student with autism by: a) conducting a reinforcer survey; b) watching what the child appears to enjoy; c) conducting a stimulus preference assessment. In a stimulus preference assessment a child is given choices among potentially reinforcing items and the child's preferences are determined by what items the child selects.

☐ 2. It is easiest if the student is reinforced using tokens. Tokens consist of small pictures, plastic chips, pennies, etc. that the child learns to accumulate and then exchanges for a selected back-up reinforcer. Select what to use for tokens and the number of tokens that the child needs to earn before receiving the back-up reinforcer (typically 5 or 10).

☐ 3. Use a token strip that consists of a sequence of Velcoed squares corresponding to the number of tokens the child needs to earn and a picture and/or text for what the student is working (e.g., time on a computer).



☐ 4. If the student has never used tokens, you will need to teach it by starting with the token strip filled except for one token. The student earns the token, then takes the picture and/or text of the back-up reinforcer and exchanges it for the back-up reinforcer. Once the child does this twice, then have two token spots free and continue in this way until the student is expected to fill the complete token strip.

☐ 5. Be absolutely clear and precise of the appropriate behaviour or the correct responses you are reinforcing. You should write it out (e.g., “I shall reinforce the student with a token for every time he lines up in class without help.”).

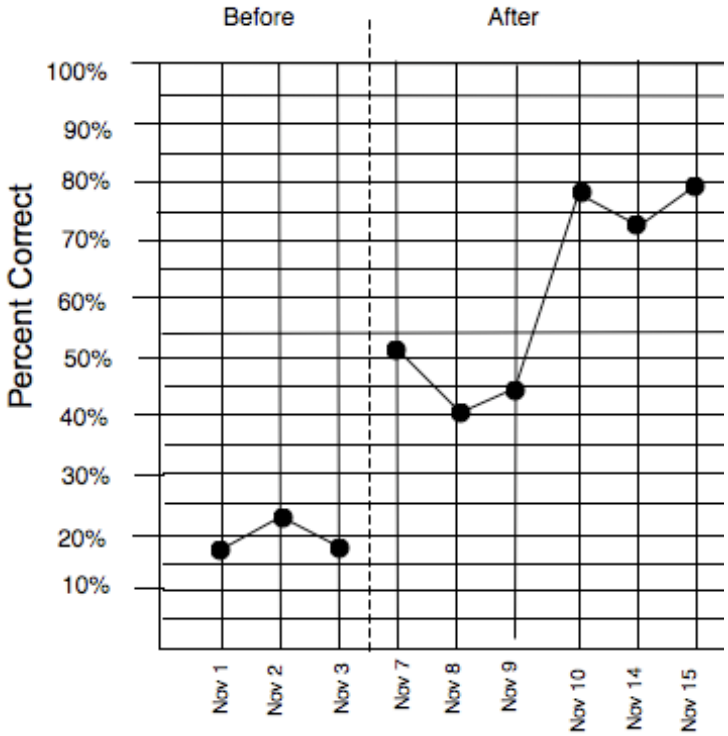
☐ 6. Decide on the rule for the delivery of tokens (schedule of reinforcement). For example, a token can be delivered for every time the student displays the target appropriate behaviour or correct response (fixed ratio 1 schedule of reinforcement),

for every second correct response (fixed ratio 2 schedule of reinforcement), on average for every third appropriate behaviour (variable ratio 3 schedule of reinforcement). When the student is learning something new, reinforce more often.

7. When you deliver reinforcement do so:
   - Immediately
   - Pair it with descriptive praise (i.e., describe the behaviour that is praised, (e.g., "I like the way you are sitting up straight, looking at me")).

How To Evaluate:

1. Before you start an individual reinforcement system, you should take about three days of baseline data on what the student is doing before you introduce the individual contingency. For appropriate behaviour, use a momentary time sampling observational method. Here, you would select intervals of times to observe the student (e.g., every 10 seconds, 30 seconds, 5 minutes, etc.) for the same period of time (e.g., 10:30 – 11:00 am) each day.
2. You need to have a way of signaling you when the time interval is up, so that you can observe the student at that instant. You can use a stopwatch or an audio machine with recorded sound signals that you listen to.
3. At each interval, record whether or not the child displayed the appropriate behaviour at that instant, based on a clear and measurable definition of appropriate behaviours (e.g., "The student will be considered to be on-task when he is seated, looking at the teacher, another student who is responding, or on provided academic material").
4. At the end of the observation period (e.g., 30 minutes, 60 minutes), divide the number of times the appropriate behaviour occurred (e.g., 9) by the total number of observations (e.g., 15). Convert that number to a percentage (e.g., 9 divided by 15 = 60%).
5. Continue keeping this data for about one week after you start the individual contingency.
6. Place the results on a graph such as the one show below to see if there was an increase in appropriate behaviour associated with the start of the individual reinforcement system.



Example: Robert is a six-year old boy with autism in a grade one inclusive classroom and is receiving most of his instruction through a modified curriculum (supported by an educational assistant). Ten words corresponding to the numbers 1 – 10 are placed in front of Robert in a random order. Robert is asked to touch one of the printed words when named. For each unaided correct response, Robert is given a token to place on his ten-item token strip. Once Robert gets all ten tokens, he exchanges them for a quarter of a picture of a computer. The token on his token strip is removed and Robert starts to earn an additional set of 10 tokens that will be exchanged for a quarter of a picture of a computer. Once he gets all four pictures, he is given a 5-minute break to run a preferred program on the computer at the back of the class.

ABA Procedure: Social Script Training

Description: A play script is developed that is of interest to a child with autism, is at that child's ability level and is also of interest to potential play partners.

Level of Responsibility: School

Reference: Charlop-Christy, M.H., & Kelso, S.E. (2003). Teaching children with autism conversational speech using a cue card/written script program. *Education and Treatment of Children, 26*, 103-127.

Procedure:

1. In collaboration with those implementing social script training, select a theme for the script that: a) is of interest to the child with autism; b) at the ability level of the child with autism; c) is of interest to other children; and, d) involves interdependence between two play partners.
2. Write up the script including the needed play materials.
3. Model the script using video modeling or role-playing.
4. Arrange for the child with autism and two other children to participate in each session, one as a play partner and one as an observer.
5. Prompt the children to follow the play script.
6. Fade prompts and encourage spontaneity in following the script.
7. Prompt and praise the use of the social script in natural play situations.
8. Repeat with a second script.

How To Evaluate:

1. Using the measurement of peer interaction, take baseline on the amount of peer ineraction shown by the child with autism during recess. Continue on after the introduction of social script training

Example: The Ball and Pipe Game

Materials:

- A soccer size ball that has unique color (e.g., yellow) that is only used for this game
- Black plastic 2" diameter PCP pipe cut into two foot lengths (total of 4)

Rules of the Game

On a playground, Leo (child with autism) and a peer are positioned approximately 3 yards apart with one foot touching a marker (e.g., bean bag) placed on the ground. The players face one another. Approximately one yard behind Leo, one pipe is placed upright into the ground. Behind the peer, three separate pipes are placed one yard

behind the peer, in a row and spread approximately one yard from one another. The one pipe behind Leo has a number “1” marked on it and each of the three individual pipes behind the peer have a number “3” marked on it. A paper 2-inch coin is constructed on one side of which the word, *Leo* is written and on the other side, *Friend* is written. The coin is flipped and the name that is showing gets to go first.

The player who is starting, places the ball any where within kicking range from his/her marker. The player kicks the ball aiming at a pipe, keeping the non-kicking foot on the marker. The goal of the game is to knock down a pipe and earn the number of points marked on the pipe. Leo has three pipes to aim at, each worth three points. The peer only has one pipe to aim at, worth one point. (The game is set up in favour of Leo who is likely to be less skilled than his peer).

When a shot is made, the opponent tries to block the shot but cannot move his/her foot from the marker. The peers take turns making shots until one accumulates 10 points and then is the winner.

<u>Set Up</u>

Before this game is initially played, class volunteers are asked to learn how to play the game by an adult who would be present to set this up. The explanation given is that this is Leo’s game and that we are looking for volunteers to learn how to play this game with Leo. Leo then picks up to three children initially to play the game.

At the next recess, the four children including Leo go to the playground and the game is explained by the adult facilitator. The adult facilitator first describes the rules of the game and then models how the game is played. Next, one game is played between Leo and one peer, with the paraprofessional located beside Leo, providing physical and verbal prompts when necessary. The other two peers watch how the game is played. After the first round, a different peer is asked to play with Leo. Thereafter, Leo or a peer can initiate the ball and pipe game.

It is important to systematically fade out the presence of the adult facilitator over time. It is likely that the adult needs to be present as long as Leo needs help in following the rules of the game. If Leo does not follow a rule of the game (e.g., keep his foot on the marker), the game is paused for correction and then the ball is given to the peer for a kick. The same correction method is used if a peer violates a rule.

The prompts should be faded out in five steps with the progression of fading steps occurring when Leo completes one game with no rule violations:

1. The adult is located behind Leo, assisting him in doing the game
2. The adult is located approximately 2 metres off to the side providing Leo with verbal instructions
3. The adult is located two metres off to the side providing verbal instructions but periodically walking away for thirty seconds at a time.

4. The adult is located approximately 5 metres away and present only during the initial set up
5. The adult sets up the game, but then walks away

Checklist

IT 17

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ABA Procedure: The Peer Buddy System

Description: In the Peer Buddy System, each child in the class is paired to play with a child in the class each day. The buddies are expected to play with each other during recess and each day the buddies are rotated.

Level of Responsibility: School

Reference: Laushey, K. M. & Heflin, L. J. (2000). Enhancing social skills of kindergarten children with autism through the training of multiple peers as tutors. *Journal of Autism and Developmental Disorders*, *30*(3), 183-193.

Procedure:

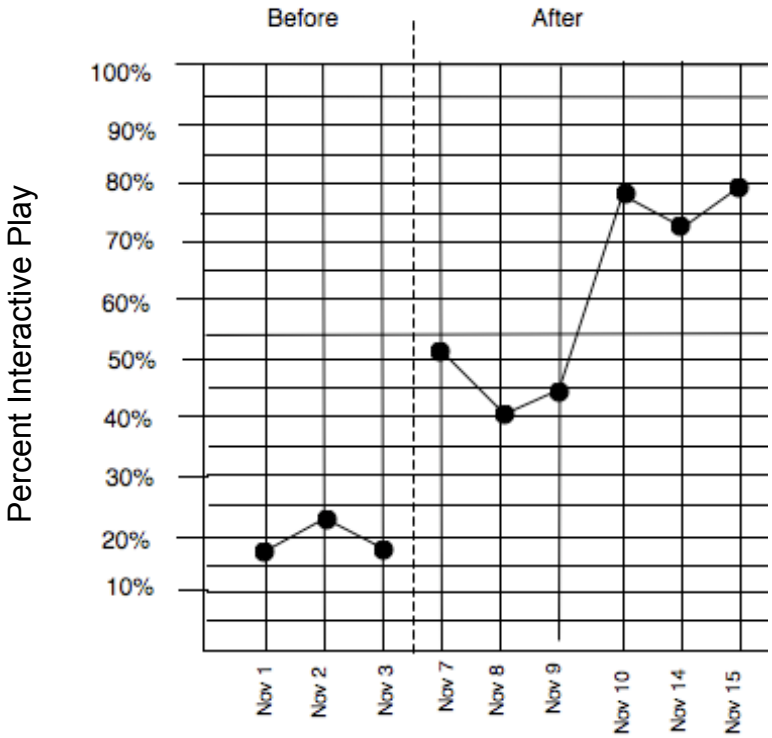
1) Have a discussion with the class on ways that people can be the same and different
2) Introduce and discuss the buddy system rules. The rules are that it is important to stay with, play with and talk to your buddy.
3) Make up a buddy system board. At the beginning of each week the board should be set up to display who each child will be paired with. The board should be displayed in the classroom. For example,

Child	Monday	Tuesday	Wednesday	Thrusday	Friday
Abbey	Zack	Chris	Vanessa	Tom	Vanessa
Ben	William	Zack	Tom	Theresa	Tom
Brian T	Vanessa	William	Theresa	Chris	Theresa
Brian S	Tom	Vanessa	Chris	Zack	Chris
Carly	Theresa	Tom	Zack	William	Zack
Carol	Chris	Theresa	William	Vanessa	William

4) Prior to implementing the buddy system, let the children know that if they follow the rules they will get a chance to win a prize.
5) For the first 4 weeks, place the names of children who follow the rules in a container and each day draw a name to see who wins a prize for following the buddy system rules.
6) At the beginning of each day have the children look at the buddy system board and determine who their buddy will be for that day.
7) Reinforce buddy pairs who follow the rules by immediately praising them (e.g., “I like the way you are staying together and playing”).
8) Once the children are following the buddy system rules consistently, begin to fade the amount of praise and the amount of adult presence.

How To Evaluate:

1. Before you start the buddy system, you should take about three days of baseline data on what the student is doing before you introduce the buddy system. For peer interaction, use the momentary time sampling observational method. Here, you would select intervals of times to observe the student (e.g., every 10 seconds, 30 seconds, 5 minutes, etc.) for the same period of time (e.g., 10:30 – 11:00 am) each day.
2. You need to have a way of signaling yourself when the time interval is up, so that you can observe the student at that instant. You can use a stopwatch or an audio machine with recorded sound signals that you listen to.
3. At each interval, whether or not the child was engaged in interactive play. Definitions and a data sheet can be found at AT6.
4. At the end of the observation period (e.g., 30 minutes), divide the number of times the child was engaged in interactive play (e.g., 9) by the total number of observations (e.g., 15). Convert that number to a percentage (e.g., 9 divided by 15 = 60%).
5. Continue keeping this data for about one week after you start the buddy system.
6. Place the results on a graph such as the one show below to see if there was an increase in interactive play associated with the start of the buddy system



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ABA Procedure: Classwide Social Skills Program (CSSP)

Description: The Classwide Social Skills Program (CSSP) is a program to teach a series of social skills to entire elementary-school classes. In order to see gains for the child with autism, CSSP should be used in conjunction with other interventions such as social scripts.

Level of Responsibility: School Board

Reference:

Hundert, J., & Taylor, L. (1993). Classwide promotion of social competence in young students. *Exceptionality Education Canada, 3,* 79-101.

Procedure:

1. Identify the social skill that you will be using CSSP to teach (e.g., listening to others, sharing, helping others) using the CSSP – Class Rating Form (located at the end of this description. This form lists the 22 areas that CSSP can target for Grade 1 to 4. For each skill rate your class by checking off whether the class definitely displays the skill, somewhat displays the skill or does not display the skill at all.
2. Present the rationale to the students. Start by introducing the social skill to the children in a discussion format. Talk to the students about the importance of the skill (e.g., "Today we are going to learn about listening to others. When a friend is speaking, do you listen to what they are saying?" [*Pause for response.*] "How do you feel when your friends listen to what you have to say?" [*Pause for response.*]).
3. Model the skill. First, you will present a sequence of three to five, 8 inch by 10-inch cards, depicting the components of the skill. Each of these cards will have a line drawing and a brief label of the skill. For example, the first card consists of a picture of two people, one speaking and the other looking and listening. The label would be "Look and listen." Second card – the same picture but with the label "Wait your turn to speak." Third card – the same picture but with the listener thinking about what the speaker is saying. The label would be "Think about it." Fourth card – same picture but now the listener is speaking and the speaker is listening. The label would be "Talk about it." Once you have gone through these cards with the children provide the students with a short role-play depicting the social skill. For the role-play you will need 2 adults
4. Identify the skill components with the students. Lead a discussion about the role-play that the students just saw and help the students identify the skill components (e.g., "When I was talking what was the first thing that Mr. Smith did?" [Wait for a response close to "look and listen."]). Then show the first card (e.g., "That is right: Mr. Smith looked at me and listened). Continue like this for the remainder of the skill component cards. This is also a good time to discuss feeling s (e.g., "How do you think I felt when Mr. Smith listened to me?").
5. Have a volunteer practice with you. Ask for volunteers to practice the skill that was just modeled (e.g., "Who would like to come up and practice listening to a friend?"). Begin with going over the skill components with the volunteer (e.g., "First let's remember the steps of listening. What is the first step? [*Point to the first cue card*]).

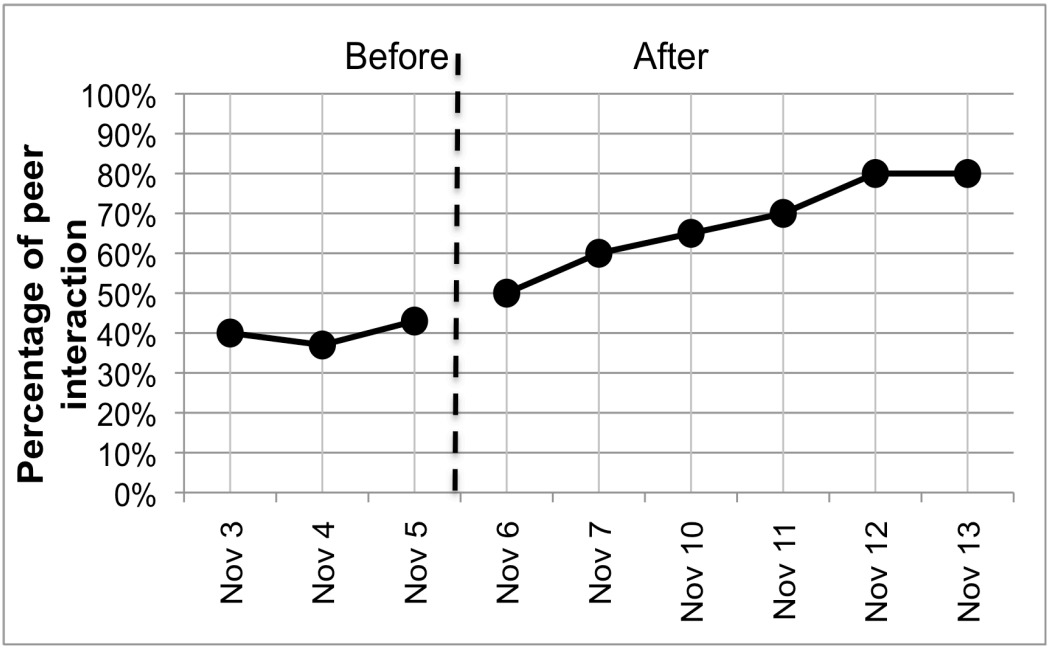
Continue like this until you have gone through all of the cards. Then, have the volunteer role-play with you the same situation that was just modeled. Once the role-play is finished, go through the skill components again in the same manner as before (e.g., showing the skill component and then discussing how it was shown in the role play). Praise the volunteer.

6. Present a non-exemplar of the social skill. Here you will role-play the same situation but this time leave out skill components. Present it to the class by saying, “Mr. Smith and I are going to practice listening again but this time we are going to make mistakes. I want you see if you can tell me which steps we left out.” Then role-play the situation again but make mistakes (e.g., the listener should be looking around or interrupting the speaker). At the end of the role-play ask the students to tell you what mistakes you made and discuss how those mistakes would make everyone feel. It is important to note that the students should not participate in the role-play where mistakes are made; they should only participate in practicing the correct social skill.
7. Have the children practice with each other. This time two student volunteers are asked to role-play the social skill but before they begin you suggest different times when the social skill can be used. This is an attempt to have the children act out something different and more natural than what was acted out previously. Remind the students of the skill components by going through the skill component cards again. Have the volunteers perform the role-play and provide help when needed to ensure that they are successful. Once the children have finished their role-play discuss the skit as a class and identify how the students showed the skill components.
8. Now the students are ready to put the social skill into practice. For the next 1 to 4 weeks, depending on the needs of your class, on social skill should be the focus. Each morning, lead a discussion about the social skill and when the social skill can be used throughout the day. At the end of the school day, lead a discussion asking the children when they had the opportunity to use the skill that day and point out times that you observed the children using the target social skill.
9. Reinforcement is a very important aspect of CSSP. One method is to use sunshine badges. Each day pick five children to wear a sunshine badge (e.g., a small stick-on badge worn by the student). When you observe one of these five children displaying the social skill, praise them and provide them with a “ray of sunshine” (e.g., a highlighter mark on the badge) or an “invisible ray of sunshine (e.g., tracing a line on the child’s badge with your finger). At the end of the school day, these five children should be asked about how they received their ray of sunshine and should be asked to add a token to the class’s token board (e.g., a classwide token board could be a poster up on the wall that matches the theme of the classroom but has places to put tokens. For example, a picture of a tree that the children add apple tokens to). Once the children, as a group, receive all of the tokens for displaying the social skill they should be given a reward for all of their hard work. A reward could be a pizza party, watching a movie, or any other activity that would be fun for the children.
10. A note should be sent home that informs the students' parents about the social skill that the class is learning about. The letter should encourage parents to praise their child if they see that he or she is practicing the social skill. The letter should also

ask parents to inform you of situations when the child practices the social skill in the community so that these experiences can be shared with the class (see and example of a home note at the end of this description).

How To Evaluate:

1. Before you start CSSP, you should take about three days of baseline data on the student with autism's peer interaction. For this data you will select a 15-minute period where you will observe the child with autism as well as two peers (one peer should be average in peer interaction while the other peer is next lowest in peer interaction to the child with autism). Use a 10-second momentary time sampling observational method.
2. You need to have a way of signaling yourself when the time interval is up, so that you can observe the student at that instant. You can use a stopwatch or an audio machine with recorded sound signals that you listen to.
3. At each interval, record whether or not the child with autism and each of the peers displayed interactive play (e.g., interactive play (IP) or no interactive play (NIP)).
4. At the end of the 15-minute observation period, divide the number of times each of the children engaged in interactive play (e.g., child with autism = 12, peer 1 = 20 and peer 2 = 28) by the total number of observations (e.g., 30). Convert that number to a percentage (e.g., 12 divided by 30 = 40%, 20 divided by 30 = 67% and 28 divided by 30 = 93%).
5. Continue keeping this data for about one week after you start CSSP.
6. Place the results on a graph such as the one show below to see if there was an increase in appropriate behaviour associated with the start of CSSP.



Classwide Social Skill Program – Class Rating Form

Your Name_____Class_____School _____Date _____

Rate the degree to which the class is proficient in the following social skills. Use this rating to determine which social skills you will be teaching in the Class Wide Social Skills Program. To what extent does each of the following skills need to be taught to the class. Put a checkmark in the column that best indicates your answer.

No	Social Skill	Definitely	Somewhat	Not at all
1	**COMMUNICATION SKILLS** Listening to others			
2	Following instructions			
3	Introducing myself			
4	**INTERPERSONAL SKILLS** Staying out of fights			
5	Handling being corrected			
6	Joining in			
7	Sharing			
8	Complimenting			
9	Helping others			
10	**COPING SKILLS** Relaxation			
11	Problem-solving			
12	Expressing anger appropriately			
13	Apologizing			
14	Ignoring distractions			
15	Responding to teasing			
16	Negotiating / compromising			
17	**CLASSROOM SKILLS** Bringing material to class			
18	Completing assignments			
19	Asking for help			
20	Making corrections			
21	Contributing to discussions			
22	On-task behaviour			

CLASS WIDE SOCIAL SKILLS PROGRAM – HOME SHEET

SKILL #1: LISTENING

Dear Parents:

Our class is learning some ways to be good friends and to work well in the classroom. Each week, we shall be learning a new skill and the students will try to practice that skill at school as well as at home.

This week, the class will be learning about being good listeners. The students know that to be a good listener, they must:

STOP what you are doing

LOOK at the person speaking

QUIET until it is your turn to talk

If your observe your child trying to listen at home, please fill out the form below and return it with your child. We shall discuss it in class.

HAPPY NEWS

_____ did a good job listening when _____
(Name of student)

_____

_____
Signature of parent