

## Chapter 5 The Comprehensive Classroom Token Economy

### Introduction

Earlier a number of structured interventions were discussed that employed reinforcement mediators or tokens. These interventions can be considered simple token economies. However, the token economy has also been used for many years as a comprehensive behavioral intervention system. The first book written on the system was by Drs. Ted Ayllon and Nathan Azrin (1968). Dr. Alan Kazdin's (1977) review of the token economy literature, less than ten years later, illustrates how widely the system came to be used in a short time. A recent and detailed manual for a comprehensive token economy has been prepared by Tom Dowd and his associates (1993).

A comprehensive token economy is very much like the real world in many respects. One must work to earn an income. There are things that we can buy with this income that we need to maintain ourselves and to make life enjoyable. There are laws or rules that must be followed and penalties for breaking them. A well designed and comprehensive token economy prepares students for living in the world. The following presentation is an illustrative example, not a blueprint. You should design a system that meets your situation and needs.

The comprehensive classroom token economy is a very good system for providing classroom structure and for controlling a variety of problem behaviors. It is also good for motivation and for demonstration and teaching purposes (Henley, 1997). The development of a comprehensive classroom token economy requires careful planning. Implementation of the token economy requires trial periods followed by evaluation and revision. The resulting token economy you will find easy to use and very effective. You will not reach a point where you are comfortable with the system without the investment of some time and effort. Because of the investment in time and effort a comprehensive token economy should never be used unless the circumstances require it. Some of the more basic strategies discussed earlier will usually be sufficient in most situations. You are most likely to find a need for a comprehensive system if you work with a group of students all or most of whom have moderate to serious problems. This usually means you are serving these students through a self-contained classroom program, in a special day school or in a residential setting.

### **Part One: Promoting Educational Development**

#### Introduction

A token economy can be an effective tool for motivating participation in educational activities and independent functioning. Part One outlines an approach to motivation based on token income earned for productive work and responsible behavior. The component will indirectly reduce behavior problems in a classroom by increasing task-directed behavior. That is, reducing inappropriate

behavior through the differential reinforcement of other behavior (DRO). It also places the initial emphasis of your behavior management efforts on a positive approach. You should focus reinforcement on educational tasks. You can also reinforce responsible and exceptional behavior in a comprehensive token economy, but the focus should be educational tasks.

### Educational Tasks

Create income through payment for productive work using educational task periods as payment intervals. An educational task, for our purposes, is defined as academic tasks, e.g., math or reading and as development tasks, e.g., social skills instruction or group problem solving programs. Any activity that has as its primary purpose helping students to acquire skills or develop abilities can be considered an educational task.

Make payments at the end of each work period according to a pre-determined payment schedule. Payment based on productive work is determined in one of two ways. First, base payment on an objective standard such as the portion of an assigned task that is correct. In its simplest form this type of payment would result in one point or token given for each percentage point. That is, translate the percent correct on a task into a payment amount, e.g., 88% correct is 88 points or tokens. However, a recommended variation on this approach to payment will be explained in Part Four.

Second, base payment on a subjective standard such as teacher judgment. Use this approach when students do a task which is difficult to score objectively, e.g., an art activity or involvement in a development activity such as an emotional education or problem-solving group. Under this type of payment, the teacher judges the work or participation and assigns a letter grade such as "B". The letter grade then translates into income according to a pre-determined schedule, e.g.; a grade of "B" translates into 85 points, etc.

Avoid disparity in income potential by using the above method to pay for work. Disparity results from individualization and unequal quantities of assigned work for different students. For example, if one student has a ten response task and gets eight correct, and another student has a twenty response task and gets sixteen correct, both would receive an equal payment based upon the percent correct standard. This approach allows individualized instruction without causing any inequities in potential earning power.

### Responsible Behavior (Optional)

Another possible source of income you can include in a classroom token economy is payment for responsible behavior. By responsible behavior is meant those behaviors that good students are normally expected to exhibit. Some educators call these "teacher pleasing behaviors" or "behaviors for independent functioning." To do this, it is necessary to establish a payment schedule for these

behaviors. An illustration follows:

### **Responsible Behavior**

- |   |  |
|---|--|
| 1. Having necessary materials = 2 points  | 4. Work completed on time = 2 points   |
| 2. Getting started immediately = 2 points | 5. Work done neatly = 2 points         |
| 3. Promptly follow directions = 2 points  | 6. No unnecessary questions = 2 points |

The amount paid for each item on the responsible behavior payment schedule can vary. By varying the amount paid for different items, it is possible to place a premium on those items considered to be the most desirable or the most in need of improvement. As priorities change, revise the payment schedule to reflect those changes. It is also important to allot an amount that allows some flexibility in payment. For example, assign "beginning work on time" a value of two. Work started on time would earn two points. A short delay in starting would earn one point. A significant delay would earn no points. By following this procedure, it is possible to use differential rewards for approximations to the desired behavior.

### Exceptional Behavior (Optional)

It is also a good idea to include in a classroom token system a bonus points component. This allows you to award extra points to students who have a particularly good period or who engage in various targeted prosocial behavior, e.g., helping others or sharing. Use of this component is solely at the teacher's discretion, it is not necessary to have a formal payment schedule.

## **Part Two: Positive Consequences for Behavior**

### Introduction

Positive reinforcers must be available to exchange for the tokens students have earned. A token economy is no better than the incentive value of the rewards available in it. Careful selection of rewards for your reinforcement menu is a very important component of a token system. Students must know that they can exchange the tokens for something that they want.

### Consumer Items

Think of the rewards available in a token economy as consumer items that students can buy with their income. Consider the rewards you use as goods, services, and activities (see Figure 5.1). Select these consumer items by survey, observation, experience, or experimentation. When a token economy fails, it is frequently due to a lack of motivating consumer items or an inappropriate balance between income and purchasing power. Arrange consumer items in a hierarchy from desirable to very desirable with appropriate increments in costs. Pricing is discussed further in Part Four.

### Examples of Consumer Items

#### Primary Reinforcers

1. Dried fruit
2. Dry cereal
3. Corn or potato chip
4. Cracker
5. Cookie
6. Candy
7. Chocolate milk
8. Juice
9. Ice tea
10. Cola

#### Secondary Reinforcers (cont.)

- B. Activity Rewards:
1. Play with blocks
  2. Draw or color
  3. Work a puzzle
  4. Play with clay
  5. Use finger paints
  6. Choice of seat
  7. Read comic book
  8. Computer game
  9. Play board game
  10. Be a messenger

#### Secondary Reinforcers

- A. Material Rewards
1. Special pen or pencil
  2. Toy car
  3. Sticker or stamp
  4. Sports card
  5. Comic book
  6. Poster
  7. Magazine
  8. Bumper sticker
  9. Audio tape or CD
  10. T-shirt or cap
- B. Continued:
11. Be line leader
  12. Be a tutor
  13. Social time
  14. Listen to music
  15. Work in office
  16. Exempt an assignment
  17. Exempt a quiz
  18. Rent an "office"
  19. Work on a hobby
  20. Free-time in gym

Figure 5.1. Illustrative lists of primary and secondary reinforcers for use in a comprehensive token economy.

### Spending Opportunities

An important consideration is when to allow students to spend their earnings. Adults typically overestimate the extent to which children, and particularly children with disabilities, can delay gratification or reward. Spending delays of a week are desirable and a legitimate goal. However, one day is a more realistic period of delay for most children. Even a delay of one day is too much for many children. Thus, some individualization in the length of spending delays will probably be necessary. In some cases spending periods may initially have to be as short as a class period. The level system illustrated later offers a systematic way of working on delay of gratification.

### Home Involvement (Optional)

An additional source of consequences is the home, which represents an ecological extension of the token economy. Parents control many rewards that you can use to individualize consumer items. The home, as a source of rewards, can be very useful for students who are difficult to motivate. With parental cooperation, you can tie your point system to such rewards as TV time, bedtime, allowances, having friends over, favorite meals, and special privileges, e.g., movies, toys, games, or trips. If you involve parents in the control of consumer goods, you must provide them with regular feedback about what their child has earned.

One way to provide parents with feedback is to send home a daily report on a parent information card (see Figure 5.2). There are two procedures that help prevent alterations or destruction of the card. First, fill-out the card in ink and sign or initial it. Second, establish a policy with the parents where failure to arrive home with the card or arriving with a card that has been altered automatically signals the worst outcome. Set-up such a policy with the parents and make the child aware of it. This cancels any possible advantage there might be to "losing" or changing a card on the way home.

## **Part Three: Behavior Management**

### Introduction

A comprehensive token economy is a very useful tool for managing classroom behavior. Parts One and Two indirectly reduces inappropriate behavior by increasing the level of appropriate behavior. Part Three is a more direct approach to reducing inappropriate behavior primarily through the use of fines and charges.

### Behavioral Expectations

The first component in any behavior management system is a set of conduct rules. Limit

### Parent Information Card

<p><b>Daily Performance at School</b></p> <p>Name: _____</p> <p>Earned: _____ Points</p> <p>Date: _____</p> <p>Signed: _____</p>
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Figure 5.2. A feedback card that can be used to provide parents daily information on their child's performance at school. Performance is reflected in the number of points earned in the token economy. Points earned at school should be tied to a predetermined reward schedule at home. There should be a negative outcome planned for failure to arrive at home with the card or arriving with an altered card.

the number of rules to a maximum of seven or eight. State the rules simply and generally so each rule covers several different but related behaviors (a response class). Give each student a copy of the rules or post the rules on a large piece of poster paper in clear view of the class. For example, the rule sheet or poster might look like the following:

### Class Rules

- |    |  |              |
|----|--|--------------|
| 1. | Get permission before speaking.          | (-2 points)  |
| 2. | Get permission before leaving your desk. | (-4 points)  |
| 3. | Maintain a good sitting position.        | (-2 points)  |
| 4. | Be quiet and calm.                       | (-5 points)  |
| 5. | Be courteous to others.                  | (-10 points) |

These five rules cover a wide range of behaviors. Rule One covers all unsanctioned verbalizations. Rule Two covers all unsanctioned locomotion. Rule Three covers all undesirable in-seat positions, e.g., leaning out of chair, excessive slumping in chair, sleeping on desk, etc. Rule Four covers all behaviors that are disturbing or disruptive, e.g., making vocal or non-vocal noise, making faces, breaking objects, etc. Rule Five covers all inappropriate behaviors that are interpersonal, e.g., hitting or pushing, throwing objects at others, name calling, etc.

### Response Costs

The next step is to establish response costs or fines for violations of the classroom rules. Fines can be uniform or variable according to the importance of each rule. For instance, a talk-out might be a minor problem and a fine of two points levied for each occurrence. Out-of-seat might be a more serious problem and a fine of four points levied whenever an inappropriate response occurs.

For example, if a student violates Rule Two, in the sample conduct rules above, immediately impose the fine set for violating that rule. Impose the fine and permit no discussion. However, you should cite the amount of the fine and the number of the rule broken, e.g., "four points, rule number two." If the student begins to argue or talk-back, simply impose another fine, e.g., "two points, rule number one," etc. Provide students with an opportunity to present reasoned arguments. Set aside a time for this when instruction is not scheduled. A class meeting period, discussed later in Part Three, is one way to meet this need.

You must not make your fines too large. Moderate fines make it more likely that tokens will be available to pay fines when a rule is broken. You must be able to levy fines when rules are broken. Fines are not just for punishment but also function as feedback. Each fine represents feedback about inappropriate behavior. This feedback is important because it helps students discriminate between appropriate and inappropriate behavior and thereby aids the behavior change process. Finally, students usually view large fines as unfair and coercive. Such a perception will often promote

resistance to behavior management efforts.

### Back-up Procedures

Fines will work adequately for managing most inappropriate behavior. However, in some cases, you may need something more. Many of the traditional consequences are possibilities, e.g., time-out room, staying after school, in-school or out-of-school suspension. These or other possible consequences need to be agreed on, in advance, with administrators and in some cases with parents. Back-up procedures in the token economy are handled just as systematically as other components. This means that criteria need to be set for initiating a back-up consequence. The procedures to follow when implementing the consequence must also be planned.

### Class Meetings (Optional)

During a class meeting all the day's events are open for discussion. The class meeting, therefore, serves as a regularly scheduled time when students know they can discuss a fine or other consequence perceived as unjust. If an argument that a fine was unjust is convincing, rescinded it at the meeting. Additional fines resulting from contesting a fine, however, are not rescinded. Make students aware of the class meeting policy and regularly reminded them of it. It is sometimes difficult to have daily meetings when instruction is departmentalized or when service is being delivered through a resource model. In such cases, the meetings may have to be weekly or some alternative forum made available such as written appeals. One positive side effect of class meetings is the feedback that a student gets about his or her behavior or arguments from the comments of peers during the discussion.

### Routine Problem Behavior (Optional)

You can also use a comprehensive token economy to handle bothersome routine problems. Charge fees (not fines) for certain activities and omissions that are not conduct problems but are troublesome. Think of these troublesome behaviors as similar to the cost of maintaining a house or an automobile, e.g., insurance and repair costs. A price can be placed on such behaviors using a schedule similar to the following:

#### **Maintenance Costs**

1. Going to the bathroom at unscheduled times.....20 points
2. Going for water at unscheduled times.....20 points
3. Sharpening pencils at unscheduled times.....10 points
4. Borrowing a pencil..... 5 points
5. Buying paper to do work on.....10 points
6. Borrowing a book needed for a lesson.....10 points

7. Asking unnecessary questions \* .....5 points

\*Note: Answer the question, but charge a fee for it.

### **Part Four: Balancing the Economy**

#### Introduction

A token economy is much like the real economy that adults function in everyday. One of the similarities is a need for a balance between spending power and the cost of consumer items. A significant imbalance between these two components causes either inflation or deflation. Most of us appreciate how these economic conditions adversely affect economic stability. Therefore, you must ensure that neither condition comes to dominate your token economy. Balance in a token economy is critical if the system is going to operate smoothly and effectively.

#### Balancing Income Levels for Productive Work.

The best way to establish income levels in a classroom token economy is with a zero-point or performance floor. This can be set at any level you think appropriate but is equivalent to the lowest level of acceptable work and behavior. That is, if a student's performance falls below this point, the student should have little or no spending power in the token economy.

For example, if you set the zero point at 60%, a student who had minimally acceptable work performance (61-70%), who engaged in some responsible behavior, and who engaged in few or no inappropriate behaviors, might have a few points or tokens to spend, e.g., 100. A student who had moderately good performance would have more points or tokens to spend, e.g., 200. However, a student who had moderately good work behavior, and had misbehaved, would have fewer points or tokens to spend, e.g., 150. On the other hand, a student who had an optimal level of performance would have many points or tokens to spend, e.g., 300.

After setting a zero point, you need to determine the maximum number of points available to a student each day. To begin, compute the total points that a student can earn for each class period, day, and week. If you are using the percentage payment method and set your zero-point at 60%, this will be 40 points for the Educational Task component each period.

If you are using the Responsible Behavior component, determine the number of points that will be available each period for responsible behavior. Usually, this total should not exceed 25% of the amount available for Educational Tasks. For example, if 40 points are available for Educational Tasks, no more than 10 should be available for responsible behavior.

Thus, there would be 40 points available for the Educational Task each period and 10 points

for Responsible Behavior each period. If you use both components, there will be a total of 50 possible points per task period. The total points per day will be 50 times the number of periods. The number per week will be the daily total times the number of days in the week (usually five). Thus, a token economy that operated for seven periods a day would have a daily potential of 350 and a weekly potential of 1750 tokens per student.

Finally, set an optimal level of income based on a portion of the maximum, e.g., 95%. The use of a figure lower than the maximum makes some allowance for minor losses due to task errors. After all, no one is perfect. For example, if the maximum number of tokens per day is 350, the optimal number of points is about 330 (.95 x 350). You now have a token range of zero to the optimal number, 330 in the example (see Worksheet, Figure 5.3 and Example, Figure 5.4).

Next, set the fines for rule violations. To get an appropriate balance between total points and fines, let the assigned fines total to a value that is about ten percent of the total points to be either awarded or earned. For example, if 330 points per day could be awarded (earned), assign fines based on 33 points. Thus, if you have six rules, you might assign a five point fine to the violation of each rule. This would use 30 of the available 33 points. Of course, you can assign the points differentially so there are different size fines for different rules. Do this if you consider violation of some rules more serious than others.

If you use the Routine Problem Behavior option in Part Three, determine the maintenance costs associated with the option in a manner similar to the above procedure. You would allot costs based on 10% of the points awarded or earned. Thus, following the above illustration there would be 33 points available for maintenance costs. If there are five routine problem behaviors, you might assign a six point cost to each. Of course, differential assignment of costs to routine problem behaviors is also an option.

You should now establish what is an acceptable level of behavior. This can be done by inspecting the fines for violating class rules and the maintenance costs, if used. Based on these charges, determine how much rule violation and routine problem behavior you can easily tolerate. After you have an idea about the tolerable level of rule violation and routine problem behavior, estimate the cost for these behaviors for an individual student, e.g., 15 points. Finally, subtract your estimate from the total and you have the optimal number of points that you can realistically expect, that is, 315 (see Figure 5.4).

### Adjustments in Spending Potential

It is easier to balance the token economy if each student has the same spending potential. Unequal potential is usually due to variable amounts of time in the token economy. This problem usually doesn't arise for teachers in departmentalized programs where students move from class to class and teacher to teacher. In resource classes, individual student time in the token economy can

### Balancing Worksheet

1. Number of earning periods each day: \_\_\_\_\_
2. Zero point for earning points: \_\_\_\_\_
3. Number of points for each educational task: \_\_\_\_\_
4. Number of points for responsible behavior: \_\_\_\_\_
5. Total points available each period: \_\_\_\_\_
6. Total points per day: \_\_\_\_\_
7. Optimal level of income per day: \_\_\_\_\_
8. Number of points assigned to fines: \_\_\_\_\_
9. Number of conduct rules: \_\_\_\_\_
10. Average number of points to fine for rule violations: \_\_\_\_\_
11. Number of points assigned to maintenance costs: \_\_\_\_\_
12. Number of routine problem behaviors: \_\_\_\_\_
13. Average number of points to charge for routine problem behavior \_\_\_\_\_
14. Your estimate, in points, of an acceptable level of conduct fines and maintenance costs for each student: \_\_\_\_\_
15. Optimal number of points per day: \_\_\_\_\_ ( this value should be used to assign prices to items on the reinforcement menu).

Figure 5.3. A worksheet to aid in working out the balance between income and buying power in a token economy.

**Balancing Worksheet (Example)**

1. Number of earning periods each day: 7
2. Zero point for earning points: 60
3. Number of points for each educational task: 40 (100-60)
4. Number of points for responsible behavior: 10 (.25 X 40)
5. Total points available each period: 50 (40 + 10)
6. Total points per day: 350 (7 X 50)
7. Optimal level of income per day: 330 (.95 X 350)
8. Number of points assigned to fines: 33 (.10 X 330)
9. Number of conduct rules: 6
10. Average number of points to fine for rule violations: 5 (33/5)
11. Number of points assigned to maintenance costs: 33 (.10 X 330)
12. Number of routine problem behaviors: 5
13. Average number of points to charge for routine problem behavior 6
14. Your estimate, in points, of an acceptable level of conduct fines and maintenance costs for each student: 15
15. Optimal number of points per day: 315 ( this value should be used to assign prices to items on the reinforcement menu).

**Figure 5.4.** An example of a completed worksheet for working out the balance between income and buying power in a token economy.

be highly variable. Even in self-contained classes, there may be some variation because most students leave the class for one or more periods during the day. If you have students for different periods of time, you should equalize their potential. There are two ways to equalize potential.

Interfacing: One way to handle variable amounts of time in a token economy and spending potential is to extend the token economy into other classes that each student attends. You can extend the token economy into other classes with teacher rating scales. Rating scales can be useful both to equalize the spending potential of all students in your program and to help you extend your program into other teachers' classes. This component involves having a student's other teacher or teachers complete a simple rating scale (see Figure 5.5) on the student each day. When a student returns the scale to you or you collect it, you award or fine the student points or tokens in your token economy based on performance in the other class or classes. Interfacing is an ecological extension of the token economy.

The following example illustrates how this system might work when used with Part One. A rating scale for academic work, using a five-point scale, might have eight tokens assigned to each scale point. Thus, a rating of three would earn 24 points or tokens. A rating on responsible behavior, also using a five-point scale, might have two tokens assigned to each scale point. Thus, a rating of two would earn four points or tokens. A student getting both of these ratings from an interface class would earn 28 points in the token economy for performance in that class.

The next example illustrates how to handle conduct in Part Three. A rating scale for conduct behavior, using a five-point scale, might be set-up so a rating of three is neutral and you would award no points or tokens. However, a rating of two might be a five-point fine, and a rating of one might be a ten-point fine. On the other hand, a rating of four might earn five bonus points and a rating of five might earn ten bonus points (see Figure 5.5).

Weighting: A second way to handle variable amounts of time in the token economy is to equalize students' tokens using a weighting system. Weighting is not as desirable as the interfacing system described above, but it is preferable to having an unbalanced token economy. The worksheet (see Figure 5.6) and the following example will illustrate how this is done.

Suppose that the amount of time per day in the token economy for each student varies from one to three hours. The longest period will become the base period for the weighting. The base period is given a weight of one. Thus, for a student in the economy for three hours per day, each token has a value of one (three divided by three). For a student who is in the economy for two hours per day, each token has a weighted value of one and one-half (three divided by two). For a student who is in the economy for only one hour per day, each token has a weighted value of three (three divided by one).

You can apply this system positively in Part One by weighting earnings. You can apply it

<b>Student Rating Card</b>	
Student: _____	
<u>Performance Area</u>	
1. Educational Tasks:	Worse 1 2 3 4 5 Better
2. Responsible Behavior:	Worse 1 2 3 4 5 Better
3. Conduct Behavior:	Worse 1 2 3 4 5 Better
Teacher: _____	Date: _____

<b>Student Rating Card</b>	
Name: _____	Date: _____
Conduct Behavior	
Worse 1 2 3 4 5 Better	
Signed: _____	

Figure 5.5. Use a 5 X 8 index card for multiple rating areas or a 3 X 5 for a single rating area. Several rating cards can also be drawn on plain white paper, duplicated, and cut. This will provide inexpensive rating cards in quantity.

### Adjustments Worksheet

- I. Interfacing (using five-point rating scales):
1. Number of token points available for work during each task period: \_\_\_\_\_
  2. Number of token points for each rating point on educational tasks scale: \_\_\_\_\_
  3. Number of points available for responsible behavior during each task period: \_\_\_\_\_
  4. Number of token points for each rating point on the responsible behavior scale: \_\_\_\_\_
  5. Average number of points to fine for rule violations: \_\_\_\_\_
  6. Number of fine points or bonus points to assign to the rating points on the conduct behavior scale: 1 = \_\_\_\_\_ 2 = \_\_\_\_\_ 3 = \_\_\_\_\_ 4 = \_\_\_\_\_ 5 = \_\_\_\_\_
- II. Weighting:
1. Shortest time a student spends in the classroom (in periods or hours): \_\_\_\_\_
  2. Longest time a student spends in the classroom (in periods or hours): \_\_\_\_\_  
This is the BASE period.
  3. The weighting value for each student's points is the base period divided by the number of hours or periods a student is in the classroom. For a student in class:
    - a. For \_\_\_\_\_ hours/periods, the weight value is: \_\_\_\_\_
    - b. For \_\_\_\_\_ hours/periods, the weight value is: \_\_\_\_\_
    - c. For \_\_\_\_\_ hours/periods, the weight value is: \_\_\_\_\_

Figure 5.6. Income adjustment worksheet. Multiply each student's earned points, bonus points, fined points and/or charged points by the appropriate weight value. Make adjustments at the end of each period or school day as appropriate.

negatively in Part Three by weighting fines. You can also use weighting to equalize earnings for a student who is absent or when there is a school holiday. This is done by computing the average number of points earned during the day(s) present and awarding this number of points for each day of absence. If this is done for an individual student, apply weighting only for excused absences.

### Establishing a Price Structure

Arrange the pricing system so even marginally acceptable behavior is worth something. Thus, your lowest priced items should be within the reach of a student who is functioning at a minimally acceptable level (e.g., 60%). The more desirable items should only be within the reach of a student who is functioning at an optimal level (e.g., 95%).

You should now make-up a reinforcement menu arranged in order from the most to the least desirable items (see Figure 5.7). Next, determine what would be a poverty level, middle, and affluent "life-style" for the consumer goods available. Finally, set prices on the items so a student with low (e.g., 105 tokens) middle (e.g., 210 tokens), and optimal (e.g., 315 tokens) levels of income can afford the corresponding "life-styles".

You now have an approximately balanced token economy. You may find that, as you put the program into operation, some adjustments are needed. Thus, consider the first two or three weeks of operation as a trial period. During this time, you can make adjustments to get all of the components working together harmoniously.

### Comments on Some Other Issues

First, you may have students who hoard points or tokens to accumulate the most points. These students won't spend, only save. For these students, a forced spending rule will prevent hoarding. That is, do not allow points or tokens to carry over from one week to the next. You should allow some small carry-over, e.g., 100 tokens, but don't allow large sums to accumulate.

If you do, you may find yourself with a student who accumulates a "fortune" and decides to retire. At that point, the student is outside the system, and you have lost your leverage. For students, motivated by accumulation, use a cumulative chart of some kind (see Part Seven). Cumulative charting shows a student's total points or tokens, for any given period, regardless of how many are spent. This is not unlike the total-earned-to-date figure found on many monthly wage statements.

Second, you will occasionally have a student who wants something special that you would be willing to provide, but only at a price greater than the weekly total possible. In this case, you can allow targeted savings for that particular item only, e.g., a model car. Make it clear to the student that he or she must forfeit targeted savings (except earnings for the current week) if they are not used for the intended purchase. You should probably put this rule into a written contract for most

### Daily Reward Menu with Prices

1.	Dry Cereal	25 pts.
2.	Crackers	25 pts.
3.	Sticker	25 pts.
4.	Celebrity Pencil	50 pts.
5.	Line Leader	50 pts.
6.	Corn or Potato Chips	50 pts.
7.	Cookie	50 pts.
8.	Sports Card	75 pts.
9.	Read a Comic Book	100 pts.
10.	Listen to Tape or CD	100 pts.
11.	Candy	100 pts.
12.	Cup of Cola	100 pts.
13.	Play a Board Game	100 pts.
14.	Computer Game	150 pts.
15.	Free-time in Gym	150 pts.

**Note:** If the token economy includes a level system, items 1, 2, 6, 7, 11 & 12 are not available to students at levels four and five. The following items are only available to students in levels four and five:

16.	Social Time	150 pts.
17.	Exempt a Quiz	150 pts.
18.	Exempt an Assignment	150 pts.
19.	Work on a Hobby	150 pts.
20.	Be a messenger or Tutor	150 pts.

Figure 5.7. Illustrative lists of primary and secondary reinforcers for use in a comprehensive token economy with some reinforcers restricted by level.

students.

Third, it is possible, under a system like this, for a student to get into debt through fines and maintenance costs. You can allow this, but be careful not to let the debt become too large and oppressive. If you do, you force the student out of the system, and you lose your leverage. Once a student has a deficit, do not allow spending on consumer goods until the debt is paid. If a student gets into debt and is trying to work out of it, you may give some special project(s) to the student to earn bonus points. This will help the student unload the debt and keep him or her in the system. If you aren't using bonus points in your token system, you probably should not allow students to go into debt.

Fourth, many people have the idea that letting a student earn a reward for his or her work is equivalent to a bribe. In general usage, bribe means a payment of some kind given with the intent of perverting judgment or corrupting conduct. Few would contend that positive reinforcers used in the manner described here is an attempt to pervert judgment or corrupt conduct.

## **Part Five: Records**

### Introduction

Any systematic approach to classroom management requires some method of record keeping. The complexity of the record keeping system will depend on the complexity of the token economy. That is, the more options you use the more complex the records needed. The illustrative example (see Figure 5.8) are for the most complex case. If you develop a less complex system, modify the example by dropping the sections for components you have omitted from your system.

### Recording Sheets

Use a day-by-day, weekly recording sheet placed at the front or back of each student's work folder. Divide the sheet into days and subject areas and other categories such as responsible behavior and fines (see Figure 5.8). While it is usually easy to pay for productive work as you check tasks, it is often more bothersome to keep a record of fines.

There are two methods of keeping track of fines. First, keep a running record of fines on the chalkboard. You should place each student's name on the board, and enter fines on the board beside a student's name. Sum the fines at the end of the day and enter the total on the record sheet. Second, keep an individual tally for each student on the back of his or her weekly or daily record sheet (see Figure 5.9). With these two methods, you can apply a fine at a distance, i.e., on the board or directly, i.e., on the back of the student's record sheet. If you employ both methods, then enter the combined total in the appropriate space on the student's record sheet.

### Record Keeping

### Weekly Performance Record

Name: \_\_\_\_\_

Date: \_\_\_\_\_

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Ed. Period 1</b>					
<b>Res. Behav.</b>					
<b>Ed. Period 2</b>					
<b>Res. Behav.</b>					
<b>Ed. Period 3</b>					
<b>Res. Behav.</b>					
<b>Ed. Period 4</b>					
<b>Res. Behav.</b>					
<b>Ed. Period 5</b>					
<b>Bonus Pts.</b>					
<b>Subtotal 1</b>					
<b>Fines</b>					
<b>Subtotal 2</b>					
<b>Chart Avg.</b>					
<b>Expend.</b>					
<b>Savings</b>					
<b>Debt</b>					

Figure 5.8. Subtotal I represents the total earnings for the day. Subtotal II represents the net earnings for the day after fines for misbehavior have been deducted. The charting average is subtotal II divided by the number of educational periods for the day. This mean is only used for charting, if charts are being used. Expenditures includes all spending for consumer items plus maintenance costs, if being used. Savings and debt represent either a positive or negative balance after expenditures have been subtracted from subtotal II.



Ultimately, record keeping is the teacher's responsibility. However, there are several ways that you can reduce the burden of this chore. First, if you have a classroom aide, give the aide some or all of the record keeping responsibilities. Second, you can use student record keepers in the system. In some cases, you can place the position of student record clerk, on the reinforcement menu and sell it. Of course, you will need task related criteria, such as math skills, as well as a price attached to the job. Finally, you can put students in charge of their own record keeping. When you use this procedure, there should be regular accounting checks to ensure reliable record keeping. Good records should earn bonus points while poor records should result in a fine equal to some percentage of the error. For example, if a record check shows there is an error of 100 points more than there should be, reduce the total points by 100 and then add a 20% penalty (20 more points).

## **Part Six: A Level System**

### Introduction

A level system can serve several purposes. First, it can help with the important task of weaning students away from the structure of the token economy. Second, it can develop the self-control needed to make the transition to less structured environments. To develop self-control students need to learn to delay gratification, to evaluate their own behavior, and be rewarded by their achievement. Third, a level system can be a useful aid for evaluating student progress and communicating with others about that progress. The example that follows is adapted from a level system developed by Phillips, Phillips, Fixsen and Wolf (1974).

Scheuermann and Webber (1996) discuss several concerns about level systems when used with students in special education programs. First, a level system should not interfere with a student's access to least restrictive environments (LRE) prescribed by the IEP. Second, the curriculum content taught should not be tied to the level system. Each student's curriculum must be determined by the IEP. The objectives that are being worked on with a student in terms of both academic skills and behavior must be independent of the level system unless associated by the IEP. Finally, every student should not begin at the lowest level in the system as a matter of procedure. Rather, the level at which a student begins in a level system should be determined by an individual evaluation of that student.

A token economy is a highly structured intervention and students should only be placed in a program employing such structure based on their assessed need for it. Criteria for movement through the level system should be set based on a progression of performance criteria that have been determined to best prepare students for a change of placement to a less structured program setting. This does not mean that a student in a highly structured environment may not be able to go into the mainstream for some regular programming, e.g., physical education. Further, the criteria related to behavioral and academic performance levels in the level system as well as goal related criteria, e.g., delay of gratification intervals, intrusiveness of reinforcers, and self-evaluation should be included in

the IEP of any student being placed in a program structured by a token economy with a level system.

### An Illustrative Level System

(Note: Level III is the typical entry level)

#### **I. Fall-back Position Two.**

- a. For students who achieve 0 to 48% of the optimal number of tokens set for the token economy.
- b. Students are on task-by-task, period-by-period contract paid-off in tokens. Token exchange is at the end of the contract period for the reward specified in the contract (see Figure 5.10 for a sample contract). This procedure requires a minimal delay-of-gratification.
- c. The major motivation to move to a different level is to gain access to more desirable rewards on the reinforcement menu. That is, brief earning periods generate few tokens and limited buying power.

#### **II. Fall-back Position One.**

- a. For students who achieve 49% to 69% of the optimal number of tokens set for the token economy.
- b. The student earns tokens on the same basis as everyone else but spends tokens twice per day, usually at the end of the morning and at the end of the afternoon sessions. This level requires a somewhat longer delay-of-gratification.
- c. The motivation to move to the next level remains access to the more desirable rewards on the reinforcement menu.

#### **III. Entry Level One.**

- a. This is the level on which most students coming into the token economy usually begin. However, a student clearly able to function at a higher level should begin on that level. This level requires achieving 70% to 79% of the optimal number of tokens set for the token economy. One can either move backward or forward from this point depending on performance criteria (see examples provided at the end).
- b. Spending tokens takes place once per day, usually at the end of the day. This level represents a reasonable delay-of-gratification period.

### Performance Contract

I \_\_\_\_\_ agree that I will meet the following  
terms and conditions: \_\_\_\_\_

\_\_\_\_\_

no later than: \_\_\_\_\_

at which time I will receive: \_\_\_\_\_

\_\_\_\_\_

otherwise I accept: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Teacher Signature

\_\_\_\_\_  
Date

**Figure 5.10.** This is an illustration of one of several forms that a written performance contract may take. The penalty clause, the last clause, is optional and may be omitted. Any contract should be an agreement, not a dictated obligation.

- c. The motivation to move to the next level remains lack of access to the more desirable rewards on the reinforcement menu.

**IV. Level Two.**

- a. This is the first step leading to transition from the structure of the token economy to the less structured conditions of most regular classrooms. This level requires achieving 80% to 89% of the optimal number of tokens set for the economy.
- b. Spending tokens takes place three times per week, usually done at equally spaced intervals. This level represents an improved ability to delay gratification.
- c. The motivation to move to the next level includes access to the more desirable rewards on the reinforcement menu and progress toward release from the structure of the token economy.

**V. Level Three.**

- a. This is the second step in the transition from the structure of the token economy to the less structured conditions of most regular classrooms. This level requires achieving 90% or more of the optimal number of tokens set for the economy.
- b. Spending tokens takes place two times per week, usually at equally spaced intervals. This level represents a further improvement in the ability to delay gratification.
- c. The motivation to move to the next level includes access to the most desirable rewards on the reinforcement menu and progress toward release from the structure of the token economy.

**VI. Level Four.**

- a. This is the third step in the transition from the structure of the token economy to the less structured conditions of most regular classrooms. This level pays a weekly salary equal to earning the optimal number of tokens set for the economy.
- b. Instead of the feedback provided by earning and losing tokens as in the earlier levels, this level employs a daily rating system. The student and teacher(s) independently rate the student's educational and behavioral performance for the day. The teacher ratings are then compared to the self-ratings done by the student. Differences and the reasons for those differences are then discussed. The primary objective for this process is to teach a student to make accurate self-evaluations.
- c. Spending tokens takes place once per week. For students at this and higher levels, the

reinforcement menu should contain very desirable items; e.g., special privileges that are not available, at any price, to students at lower levels. However, at this and higher levels, access to primary reinforcers ends. This level and the levels above it represent an ability to delay gratification sufficient for most educational purposes and an ability to function without highly intrusive primary reinforcers.

- d. The motivation to move to the next level includes continued access to the most desirable rewards on the reinforcement menu and progress toward release from the structure of the token economy.

#### VI. **Level Five.**

- a. This is the final step in the transition from the structure of the token economy to the less structured conditions of most regular classrooms. This level pays a weekly salary equal to earning the optimal number of tokens set for the economy.
- b. Instead of the feedback provided by earning and losing tokens as in the earlier levels, this level employs a daily rating system. The student and teacher(s) independently rate the student's educational and behavioral performance for the day. The teacher, however, does not share or discuss his or her ratings with the student. The teacher uses his or her ratings to evaluate the student's performance. The student must depend only on self-monitoring for guidance.
- c. Spending tokens takes place once per week.
- d. A student who functions successfully at this level is effectively free from the structure of the token economy and has access to highly desirable reinforcers. In those cases where the student is in a special program, he or she has earned the chance to return to a less restrictive setting, e.g., resource or inclusion program.

#### Illustrative Level Criteria

- a. To move up requires four consecutive weeks of successful performance on the current level.
- b. To move down requires two consecutive weeks of failure to meet the criteria on the current level.

#### Transition to a Less Restrictive Placement

Since regular classrooms and some special education programs do not usually employ token economies, a student who is going to make the transition from a highly structured special education placement to a less restrictive placement needs a trial period without the structure of the classroom

token economy. The level system discussed above is a good method for preparing students to make the transition to regular class or other relatively unstructured programs.

If a student performs well in Level Five, the closest approximation to a classroom with low structure, remove the "paycheck" for at least the last week. Tell the student that he or she is "graduating" and the points or tokens are no longer needed since they aren't used in the less restrictive classroom. If the student does well, she or he is probably ready to make the move to a less restrictive placement.

Failure to continue functioning well during this transition procedure may indicate that the student isn't ready for a less restrictive placement. If the failure isn't too serious, extend the transition procedure by letting the change-in- placement go ahead with some minimal structure continued. This could be accomplished by having the teacher, in the less restrictive placement, provide feedback on the student, using the rating scales discussed in Part Four. This represents an ecological extension of the transition phase.

Reward the student based on the ratings; for example, let the student earn an end-of-the-week activity period in your special education class. Phase out this structure by dropping the ratings one class period at a time, beginning with the least troublesome one or by increasing the delay period for reward from one to two weeks, then three weeks, and so on. Finally, drop the procedure completely for a trial period.

### Evaluation and Communication

If you carefully consider the illustrative level system provided above, you can see how such a system provides a built in barometer for evaluating student progress. Movement through the level system, or lack of movement, is a good indication of the success of a student in meeting the objectives of the program. Further, the level system can serve as an aid to communication about a student's progress for anyone who understands the system's structure and criteria. For a knowledgeable person, a report on a student's current level in the system indicates several things about the student's progress or lack of same.

## **Part Seven: Feedback (Optional)**

### Introduction

An important component in any motivational system is some kind of summative feedback which helps a student see how he or she is doing. While there are several possible approaches to charting, only two will be discussed. These include private, feedback charts based on individual data and public, competitive charts based on individual data.

### Private Charts for Individual Data

This type of chart is a cumulative graph (see Figure 5.11). It simply shows the accumulated tokens acquired by an individual student over some specified period, e.g., a semester. The weekly mean is charted for an individual student on a cumulative basis. That is, the mean for week one is added to the mean for week two and so on. The chart is only for the student and is often held by the student in a folder. This type of chart is usually strictly for feedback and has no associated consequences. There is, however, no reason why consequences could not be tied to it through a behavioral contract or some other technique.

### Public Charts for Individual Data

There are many interesting ways to present this type of chart. The chart is adaptable to the age and interests of the students. One example of a public feedback chart based on individual data is the Space Race. The Space Race is a chart (see Figure 5.12) set-up on a bulletin board or wall. The race uses the earth as the point of departure and has a new destination each month, e.g., Moon, Venus, or Mars. The race can be run either weekly or monthly. If run weekly, one would have four races to the moon, then four to Venus, and so on. Posters used for an instructional unit on astronomy make good illustrations for this feedback chart.

Each student has a calibrated track between the Earth and the current destination. Each student has a "spaceship" on his or her track. Students can design their own ships as long as they meet necessary size limitations. At the end of the day, compute each student's average earnings and move his or her ship the appropriate distance down the track. For example, if after deducting fines, a student has 250 points from five periods during the day, the average or chart mean would be 50. The average is simply a technique for making the number of points charted more manageable. Calibrate the race to require 80% of the optimal number of points, available during the race period, to reach the destination. For example, if the optimal number of points for a week is 1575 then 1260 points represents the minimum number needed to reach the finish line in a weekly race.

The race can operate without a prize for the winner other than the satisfaction of finishing first. It can also provide the winner with a specific prize. An alternative is to declare everyone who reaches the finish line, during the race period, a winner. At the end of the race, all winners receive a prize. When there are multiple winners, some type of group prize, such as a special activity-period works best.

## **Part Eight: Instructional Use (Optional)**

### Introduction

A token economy is a micro socio/economic system. The token economy, therefore,

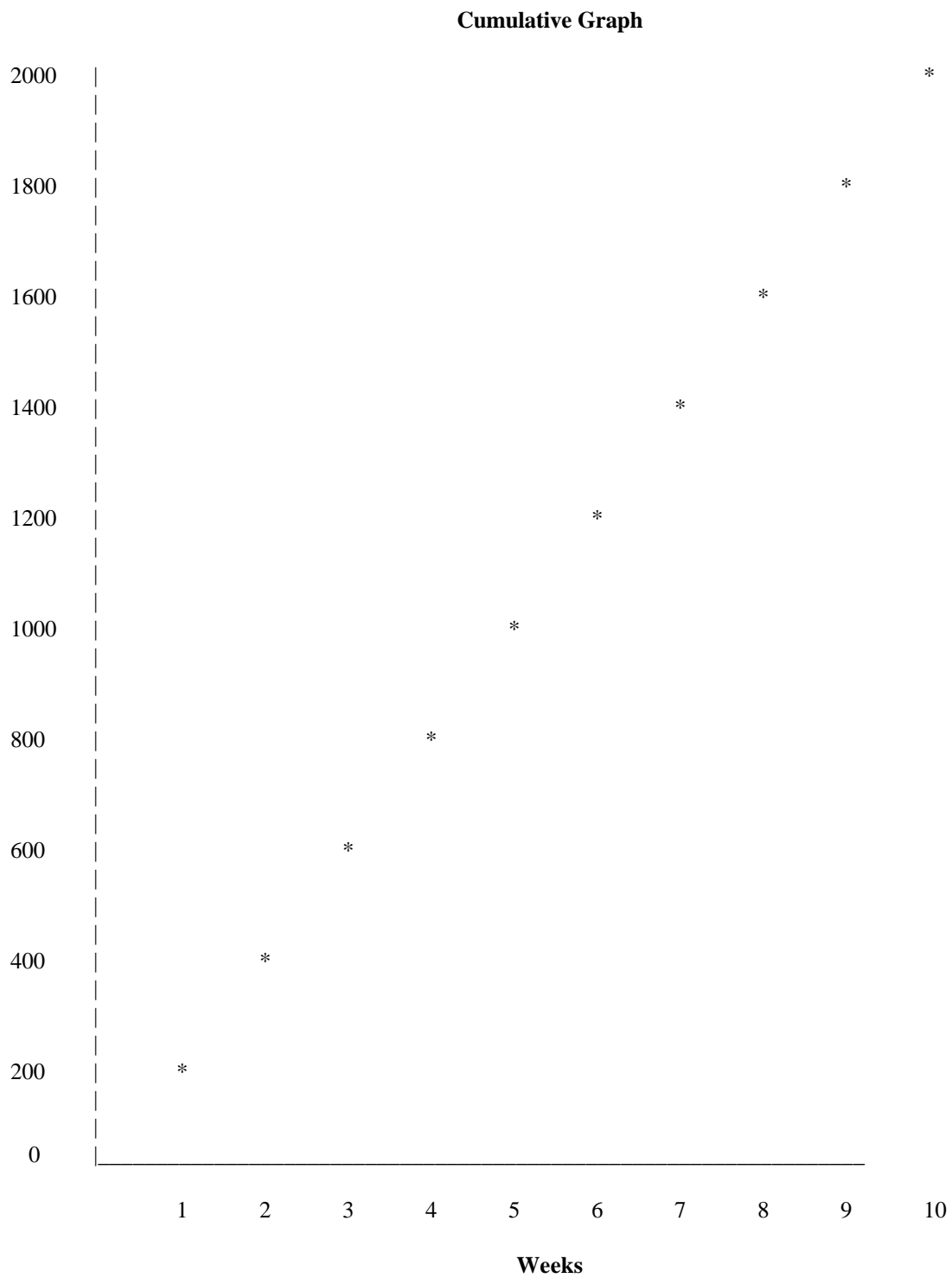
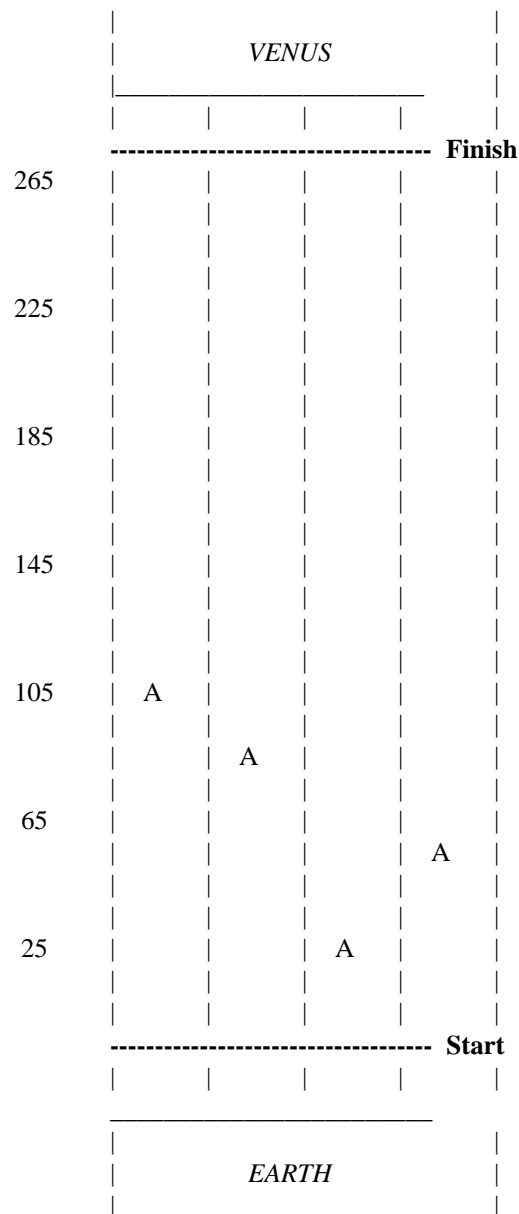


Figure 5.11. The weekly mean charted for an individual student on a cumulative basis. That is, the mean for week one is added to the mean for week two and so on.



**Figure 5.12.** An illustration of one of many possible forms that a public and competitive feedback chart, based on individual data, might take. The chart employs a daily chart mean to place the individual markers (space ships) on their calibrated tracks. Each track belongs to a different student. To reach the finish line a student must obtain approximately 80% of the average number of optimal points available during a one week period. That is, the optimal number of points per day (330) divided by the number of periods per day (5), or 66 multiplied by the number of days in the race (5), or 330 multiplied by .80 for a total of 264 points needed to reach the finish line in the above example.

approximates the real world in several ways. Because of its similarities with the real world, you can use a token economy to teach students about the real world. Through the token economy students can learn about various real world activities and processes in a concrete, hands-on manner.

### Money

Points or tokens earned by students are similar to wages and surplus wages are similar to savings or capital. Instead of using points or tokens, you can base the token economy on paper money. The class can design its own currency to put a personal touch on the system. You can design the money, duplicate it, and cut it to teach lessons on money and the U.S. Treasury.

### Retailing

You can set-up a store for purchasing the consumer goods and services available in the token economy. The store is a concrete way to teach skills like making change. Students can gain experience with occupational roles, e.g., retail and stock clerks. You can use such roles to teach or practice a variety of work-related behaviors, and social skills.

### Banking

If you use a money-based token economy, students can have checking accounts and make purchases with checks. You can still have currency, but students have the option of using checks as well. If you use checking accounts, you must create a bank. You can tie the bank and the use of checking accounts to a variety of experiences. You can teach how to open, use, and balance a checking account. You can also set-up savings accounts to teach lessons on money management. Students can also learn about the role of banks and bankers. The job of banker or other roles can even be "sold" to students as a privilege on a daily or weekly basis.

### The Social Order

You can also expand the system by getting the students involved in making class rules. You can create a student legislature and give it the authority to make temporary deletions, or additions to the classroom rules or laws. After a trial period and evaluation of the change, you can make the temporary change permanent or abandoned it. You can tie this process to lessons on civics and a discussion of what laws are, how we make laws, and why we make them. Further, you can easily relate voting and democratic process to the legislature along with simulated experiences. Finally, you can introduce the issue of law enforcement, the role of the police, and the function of courts and provide simulation experiences.

## **Comprehensive Token Economy**

### **Planning Form**

1. **Promoting Educational Development.**

- A. List tasks and activities to be reinforced:
  
  
  
  
  
  
  
  
  
  
- B. Indicate if responsible behaviors will be reinforced. If so, list responsible behaviors to be reinforced:

2. **Positive Consequences for Behavior.**

- A. List consumer items to be used as reinforcers:
  
  
  
  
  
  
  
  
  
  
- B. State schedule for spending opportunities:
  
  
  
  
  
  
  
  
  
  
- C. Indicate if the home will be involved in spending opportunities and if so, how this will be handled:

3. **Behavior Management.**

- A. List behavioral expectations for class that non-compliance with will be fined:
  
  
  
  
  
  
  
  
  
  
- B. Describe back-up procedures if token system fails to handle a behavior problem:
  
  
  
  
  
  
  
  
  
  
- C. If class meetings will be held to discuss disagreements, state the schedule for the meetings:
  
  
  
  
  
  
  
  
  
  
- D. If there will be fees charged for routine problem behaviors, list the behaviors that fees will be charged for:

4. **Balance the Token Economy.**

- A. Use the Balancing Worksheet to work out point assignments.
  
- B. If adjustments will need to be made in spending potential, use the appropriate Adjustment Worksheet for planning.
  
- C. Using the information in A above to establish a pricing structure and place prices on your reinforcer list, fines on your behavioral expectations and fees on your routine problem behaviors.

5. **Record Keeping.**

- A. Indicate who will be responsible for record keeping:
  
- B. Create sample record keeping forms and attach.

6. **Level System.**

- A. Indicate how many levels your program will have and what the criteria for moving up and down in the levels will be:

7. **Feedback.**

- A. Indicate whether or not you will use some type of feedback charting. If so, state the type of feedback to be used and if it will involve any supplemental reinforcement:

8. **Instructional Use.**

- A. Indicate whether or not you will use the token economy as an instructional device. If so, state what it will be used to teach:

### Activities

1. Design a classroom management system incorporating all of the standard components of a comprehensive token economy and any of the optional components that you think useful. Use the planning form provided.

### References

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