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## Token economy: a strategy for positive behavior management



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### Physical education class: What if?

- Students take too long for getting dressed
- Assembling for instruction takes too long
- OFF-task behavior: low levels of PA

→ What would you do?



## Physical education class: What if?

Install desired behaviors with the help of a token economy:

1. Being dressed and ready for instruction (4 min)
2. Standing quietly after whistle blow (4 sec)
3. Achieving target number of steps for that lesson (3000 – 4000 steps)



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## Objective

- Desired behaviors should lead to:
  - ➔ a more favourable learning climate
  - ➔ more time for teacher instruction
  - ➔ more active learning time for students



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## Token economy

- Effective in improving:

→ **Attentive and on-task behaviors** during physical activity <sup>1,2</sup>

→ **Exercise time and output behaviors** <sup>3,4,5,6,7</sup>

→ **Physical activity behavior** (e.g., distance walked)<sup>8</sup>

- Although several studies were identified that used token reinforcement to improve motor behaviors, only a few were conducted in school settings<sup>9</sup>

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## Token economy

### Three basic components:

1. Selection and definition of behavior(s)
2. Administration of tokens (e.g., bingo chips)
3. A scenario (i.e., a “store” or other setting) in which individuals can exchange the tokens they have earned for a variety of rewards (i.e., back-up reinforcers).

→ Strategy for teaching positive behavior

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## Study design

### PRE

High frequencies  
of disruptive  
behaviors



Live observation

### INTERVENTION

**Five week period Parkour (11♀ & 8♂, age 11-13)**

- Four similar fixed teams
- Big digital timer

**Install desired behaviors**

- Desired behavior by all team members: token: poker chip
- Each lesson 6 tokens/team to win
- Each lesson a criterion (f.e. 5 tokens) in order to win a mystery reinforcer



Live observation  
Pedometers (with display)

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## Tokens and mystery reinforcers



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## Results

1. Getting dressed within four minutes
  - At least two teams each lesson
2. Standing quietly in front of teacher within four seconds after whistle blow
  - Almost on all occasions (only three deviations)
3. Achieving target number of steps
  - All students achieved the benchmark

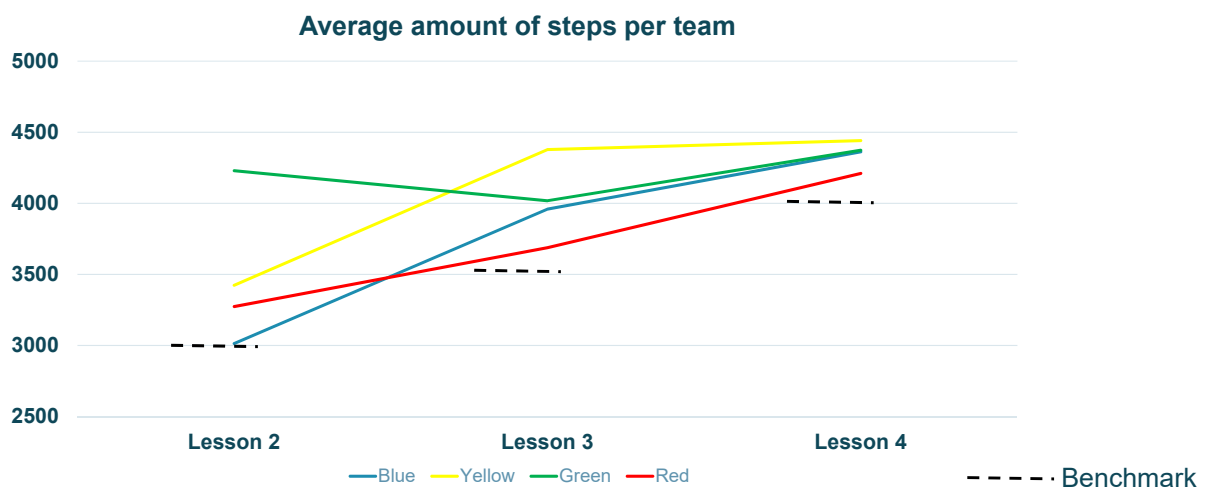


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## Results

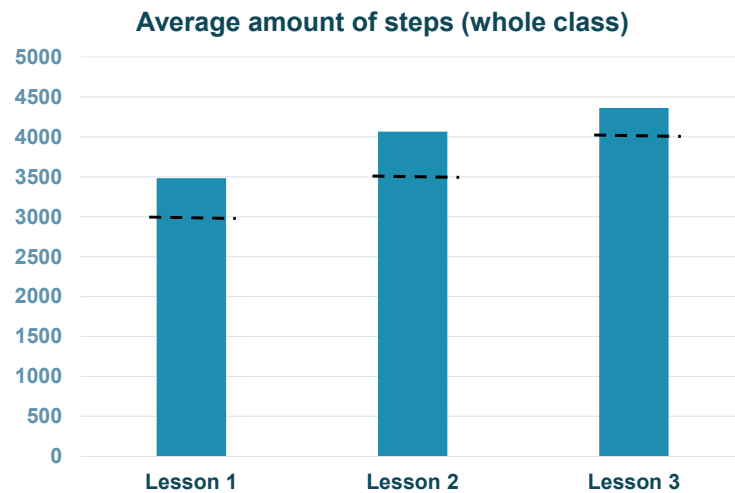


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## Results



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## Discussion

- For a few students individual strategies for behavioral change are needed
  - not implemented in this study
- When students consistently show the desired behaviors
  - Reduce schedule of reinforcement
- Mystery reinforcers: financial cost



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## Conclusion

- Token economy
  - Improved desired behaviors
  - Increased active learning time and physical activity:
    - should lead to higher learning outcomes
- Not disturbing ongoing educational process as stated by Rushall & Siedentop (1972)<sup>10</sup>
  - Token economy is an effective strategy in PE



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