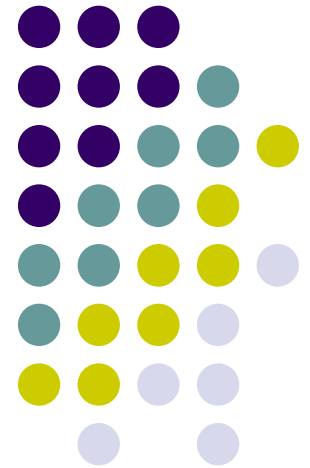


# Ethical (and other) considerations in the use of token economies to modify student behaviour



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# Co-authors



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- Research Assistant Renata Aliani



# Session Aims



- Report the ethical considerations of which teachers should be mindful when using a token economy to modify behaviour

# Defining token economies



- A contingency management system that allows participants to earn tokens for presenting specific, positive behaviours that are later exchanged for predetermined backup reinforcement.
- The essential requirement is that the tokens are systematically linked to a menu of meaningful reinforcement options.

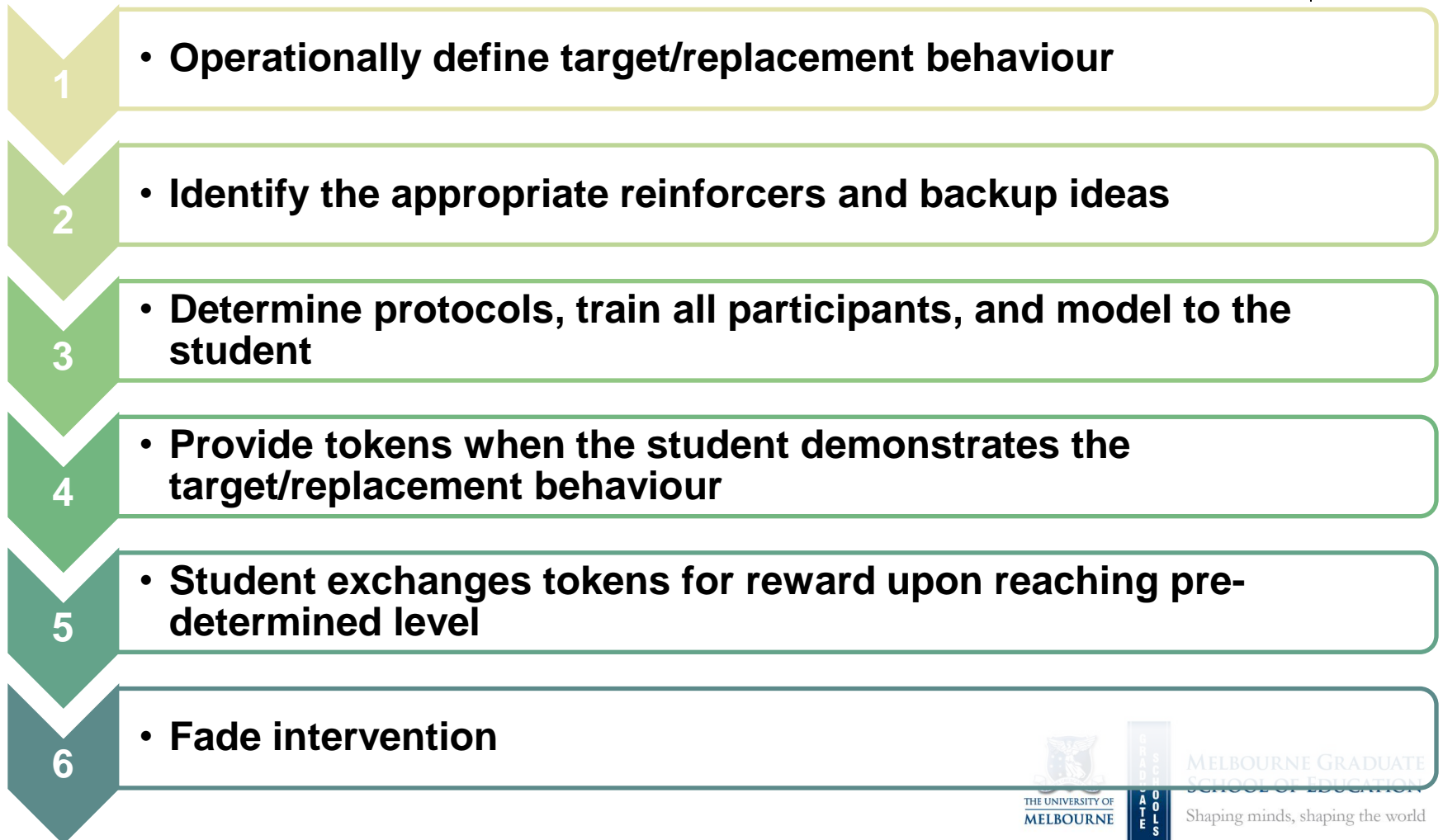
(Maggin, Chafouleas, Goddard & Johnson, 2011, p. 2)

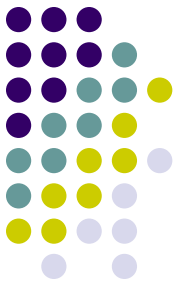


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# Phases of implementation





# mini token economy



theautismhelper.com

Image retrieved from  
<http://theautismhelper.com/fading-token-economies/>



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# Previous systematic reviews



- Token economy for schizophrenia
  - May have effects on negative symptoms
  - Unclear if results are reproducible, clinically meaningful and maintained beyond treatment
  - Worthy of careful evaluation in well designed, conducted and reported randomised trials.

(McMonagle & Sultana, 2000)



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# Previous systematic reviews



- The effects of motivating interventions on rehabilitation outcomes in children and youth with acquired brain injuries: A systematic review
- Token economies can significantly enhance memory and response inhibition performance in children with ABI.

(Tatla, Sauve, Jarus, Virji-Babul, & Holsti, 2014)



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# Previous systematic reviews



- A systematic evaluation of token economies as a classroom management tool for students with challenging behaviour
  - Extant research does not provide sufficient evidence to be deemed best-practice based on the WWC criteria.
  - Some quantitative evidence to suggest that well-executed programs can be effective.

(Maggin, Chafouleas, Goddard, & Johnson, 2011)



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# Research question



Can the use of a token economy successfully entice a student with a disability to demonstrate an expected behaviour or a replacement behaviour?

# Search Strategy



## Step 1

- To date, using the search phrase “token economies”, the following databases were searched:
  - ⇒ PsycINFO
  - ⇒ ERIC
  - ⇒ ProQuest Education Journals
  - ⇒ A+ Education
  - ⇒ CINAHL
  - ⇒ Academic Search Complete

# Interim Findings – Initial Literature Searches



	Found	Duplication	Unique
PsycInfo	190	0	190
ProQuest	233	5	228
A+ Education	2	0	2
CINAHL	6	3	3
Academic Search Complete	18	12	6
ERIC (EBSCO)	45	20	25
ERIC (ProQuest)	44	44	0
Data Mining	1	0	1
	<b>539</b>	<b>84</b>	<b>455</b>

# Search Strategy



## Step 2

- Each article was scanned to determine whether they met the following inclusion criteria:
  - ⇒ Participants attended school, grades Prep-12, and the intervention was delivered in the school
  - ⇒ Participants had a diagnosed disability
  - ⇒ Intervention included the use of a token economy to change the participants' behaviour

# Search Strategy



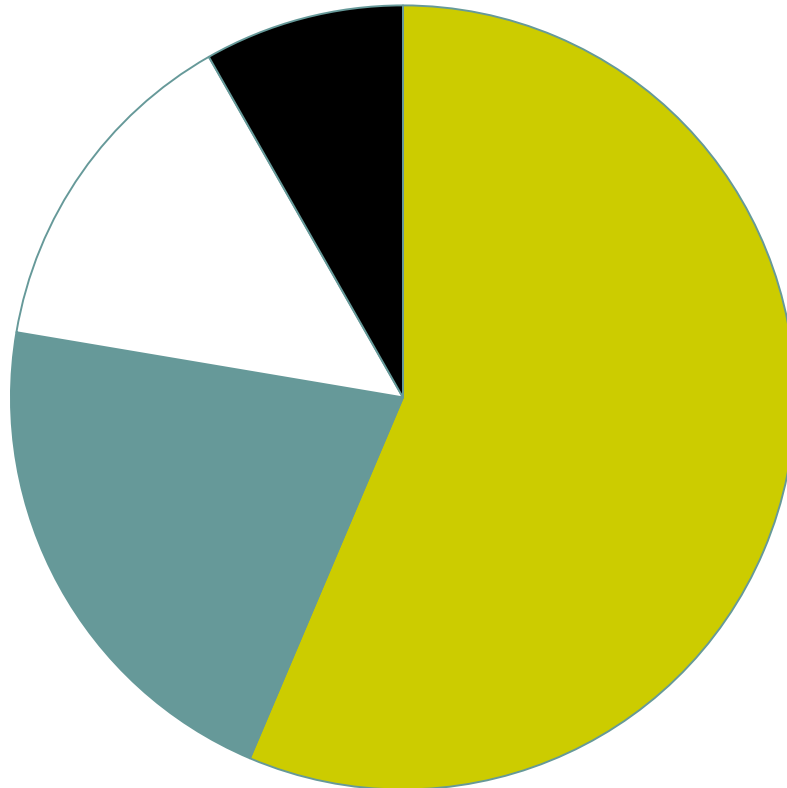
- Articles were excluded if they contained any of the following:
  - Group contingencies
  - Response costs
  - Multiple interventions where the results from the use of a token economy could not be separated from other interventions e.g. Token economy used as part of a Check In Check Out intervention

# Interim Findings – Inclusion / Exclusion Criteria



	Include	Exclude
PsycInfo (190)	16	174
ProQuest (228)	57	171
A+ Education (2)	2	0
CINAHL (3)	0	3
Academic Search Complete (6)	1	5
ERIC (EBSCO) (25)	3	22
Data Mining (1)	0	1
<b>455</b>	<b>79</b>	<b>376</b>

# Interim Findings – Reasons for exclusion



- Theoretical Paper
- Non-School Setting
- Not SWD
- Other





# Ethical considerations

- Imposing/coercing contingencies on vulnerable children
  - Potential of taking advantage of vulnerable children
  - Inappropriate administration by teachers or parents
  - Involvement of the child, where possible, and all other parties in a collaborative intervention can offset this concern

(Boerke & Reitman, 2011; Goldiamond, 2002)



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# Ethical considerations

- Possible (accidental) sabotage
  - Staff member may unwittingly offer a reward undermining the token economy
  - Family member may offer reward at home
  - Staff member may accidentally acknowledge a behaviour that the team is trying to replace
  - CRT may accidentally undermine the system
  - Sabotage arising from staff boredom with TE system so failing to implement with fidelity

(Turnbull, 1988)

# Ethical considerations



- Response cost
  - Taking away tokens when undesirable behaviour is displayed
  - They do not teach the desired behaviour, simply punish the undesired behaviour.

(Turnbull, 1988)



# Other considerations

- Importance of ensuring the target behaviours are clearly defined
  - Be nice
  - Be where you are supposed to be

(Moore, Tingstrom, Doggett, & Carlyon, 2001)



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# Other considerations

- Choice of token
  - Type, colour, shape, size
  - Swallowing hazard
  - Tearing tokens
  - Portability, especially for those with physical impairments
  - Spread of disease
  - Issues with food rewards (Prader-Willi, healthy food requirements, allergies)

(Boerke & Reitman, 2011; Turnbull, 1988)



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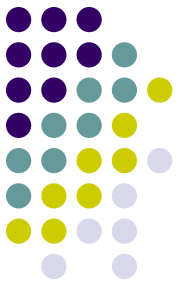
# Other considerations



- Choice of reinforcer
- Ways to identify appropriate reinforcers
  - Single Stimulus Preference Procedure (Pace, Ivancic, Edwards, Iwata, & Page, 1985)
  - Motivation Assessment Scale (Durand & Crimmins, 1992)
  - Behavioural observations

# Other considerations

- Length of time between earning and redeeming tokens



(Moore, Tingstrom, Doggett, & Carlyon, 2001)



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# Other considerations

- Simplicity of system
  - Teacher needs to be able to administer the system without disrupting flow of learning, and record data to inform decision-making re success and fading
  - Training of staff
  - Criteria for earning tokens (remove staff attitudes of worthiness, physical state, personality, or desire for power/control)
  - Cost of tokens and rewards

(Boerke & Reitman, 2011; Turnbull, 1988)



# Other considerations



- Satiation
  - Need for schedule of reinforcements and exchange rate
  - Continuous to intermittent reinforcement
  - Increase the predetermined level needed to earn the backup reinforcer (reward)

(Boerke & Reitman, 2011; Turnbull, 1988)



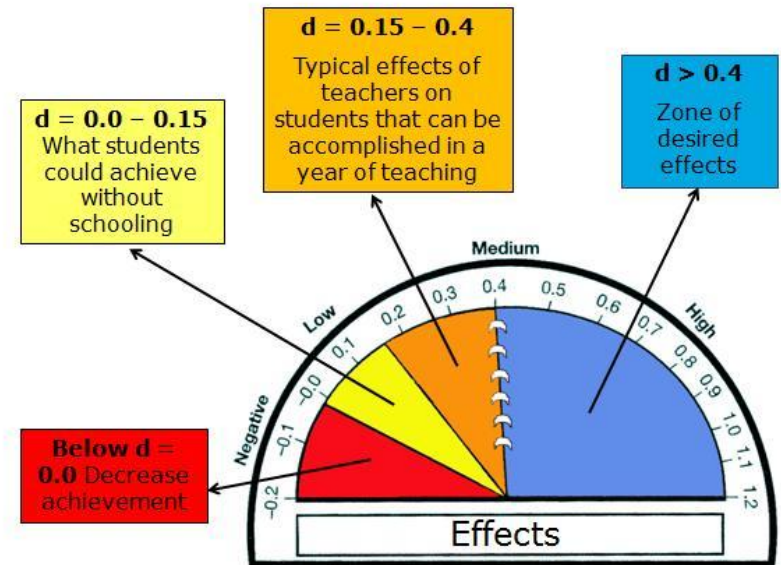
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# Next steps

- Further reviews of literature – dissertations, soft literature
- In depth review of included articles
- Calculation of effect size



Barometers of Influence

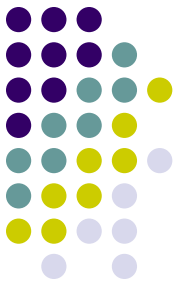


# Any questions?

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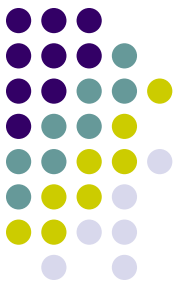
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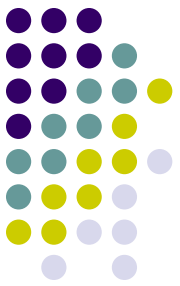
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