



Department of
Education

Year 12 SELF Cognition Modifying Behaviours



U3ATPSY

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Year 12 SELF – Cognition Modifying Behaviours

Syllabus Points Covered

- *techniques for modifying behaviour*
 - *token economies*
 - *systematic desensitisation*
 - *Cognitive Behaviour Therapy (CBT)*
 - *positive and negative reinforcement, including rewards and punishment*

Instructions:

Carefully read and make notes on the following material.
Complete all activities.

BEHAVIOUR MODIFICATION

Behaviour modification is the application of learning principles and techniques to assess and improve individual's covert and overt behaviours in order to help them function more fully in society. There are five categories of activities that can be addressed with behaviour modification techniques:

- develop a new behaviour
- strengthen an existing behaviour
- maintain an existing behaviour
- stop an inappropriate behaviour
- modify emotional behavior.

Behaviour modification applies the principles of **classical and operant conditioning** techniques to human behaviour and learning. Modification techniques use reinforcement and sometimes punishment to modify or change unwanted behaviours and encourage desirable behaviours. Behaviour modification is sometimes called **Behaviour Therapy**.

REINFORCEMENT AND PUNISHMENT

One of the keys to behaviour modification is the individual's motivation.

Intrinsic Motivation - the desire to perform a behaviour for its own sake.

Extrinsic Motivation - the desire to perform a behaviour due to promised rewards or threats of punishments.

Unlike reinforcement, punishment must be administered consistently. Intermittent punishment is far less effective than punishment delivered after every event of undesired behaviour. It is important to remember that the learner, not the teacher, decides if something is reinforcing or punishing.

Punishment often produces an immediate change in behaviour which ironically reinforces the punisher. However, punishment rarely works in the long run for four reasons:

- the power of punishment to suppress behaviour usually disappears when the threat of punishment is gone
- punishment triggers escape or aggression
- punishment makes the learner apprehensive and inhibits learning
- punishment is often applied unequally.

How to make punishment work:

- punishment should be swift
- punishment should be certain and the same every time
- punishment should be limited in time and intensity
- punishment should clearly target the behaviour, not the person
- punishment should not give mixed messages
- the most effective punishment is often omission training (negative punishment).

TOKEN ECONOMIES

A token economy is a system of behaviour modification based on the systematic reinforcement of target behaviour. The reinforcers are symbols or "**tokens**" that can be exchanged for other reinforcers. The theory is based on **operant conditioning** principles.

Tokens can be coloured counters, fake money, gold stars or faction points. These tokens can then be exchanged for a secondary reinforcement, like a prize, money payments or new toy. The tokens should be limitless, so you can never get reach a maximum or get "full". Tokens should not be food. Tokens are not normally withdrawn or used as a penalty but can be if wanted to.

Advantages of Token Economies

- Individuals learn to postpone satisfaction of basic needs.
- It's easy to avoid saturation. You can change the back-up reinforcer (more tokens needed to get the goal).
- Effective because it can be administrated at once.
- Demonstrates that behaviour have consequences.

Disadvantages or Challenges of Token Economies

- Target behaviour and rules for earning tokens must be clearly defined and specified.
- Must be able to obtain the back up as well as the target behaviour. The number of tokens must be reasonable to obtain the goal.
- The back-up must appeal.
- The individual should preferably compare with himself and not others.

ACTIVITY 1

1. To help improve Adam's attention in class a teacher set up a token economy reward system. Every time Adam made demonstrated good listening skills while she was talking she put a star on his chart. After 10 stars Adam got 2 minutes' free time to play with a toy on the mat.

a) Identify the following components of the system the teacher set up.

Target behaviour –

Tokens –

Back-up reinforcer –

Reinforcement schedule –

Rate of token exchange for reward –

b) After a several days Adam was responding well and achieving stars very quickly. How could the teacher modify the system she set up to maintain Adam's good behaviour but make it harder for him to reach rewards?

SYSTEMIC DESENSITISATION

Systematic desensitization is a type of behavioural therapy based on the principle of **classical conditioning**. It was developed by Wolpe during the 1950s. This therapy aims to remove the fear response of a phobia, and substitute a relaxation response to the conditional stimulus gradually using counter conditioning.

Three Phases of Systematic Desensitisation

- i. The patient is taught a deep muscle relaxation technique and breathing exercises. E.g. control over breathing, muscle de-tensioning or meditation.
- ii. The patient creates a fear hierarchy starting at stimuli that create the least anxiety (fear) and building up in stages to the most fear provoking images. The list is crucial as it provides a structure for the therapy.
- iii. The patient works their way up the fear hierarchy, starting at the least unpleasant stimuli and practising their relaxation technique as they go. When they feel comfortable with this (they are no longer afraid) they move on to the next stage in the hierarchy. If the client becomes upset, they can return to an earlier stage and regain their relaxed state.

The key to systematic desensitisation is the **graded exposure**. Graded exposure is the gradual introduction of things from the least to most fearful along the individual's fear hierarchy. Exposure can be done in two ways:

- In vitro – the client imagines exposure to the phobic stimulus
- In vivo – the client is actually exposed to the phobic stimulus

Example of Graded Exposure

Fear of Spiders



<i>Behaviour</i>	<i>Fear Rating</i>
Think about a spider	10
Look at a photo of spider	25
Look a real spider in box	50
Hold the box with spider inside	60
Let spider crawl across your desk	70
Let spider crawl across your shoe	80
Let spider crawl across your pants leg	90
Let spider crawl across your sleeve	95
Let spider crawl across your bare arm	100

"Spider Shots 2" by [wireheadinc](#) from Flickr.com is licensed under [CC BY-NC-SA 2.0](#) 

Advantages of Systematic Desensitisation:

- it is specific to the individual
- inclusion of relaxation skills can help with other anxiety issues.

Disadvantages of Systematic Desensitisation:

- can be difficult if the individual struggles to imagine the fears
- not effective on mental disorders like depression or schizophrenia
- can be a slow process.

ACTIVITY 2

1. Explain how a psychologist might use systematic desensitisation to treat a person suffering from a fear of dogs.

COGNITIVE BEHAVIOUR THERAPY

Cognitive behaviour therapy (CBT) is a type of psychotherapy that helps the person to change unhelpful or unhealthy habits of thinking, feeling and behaving. Used by psychologists, psychiatrists and counsellors to help patients understand, manage and change their thoughts (cognition) and behaviour.

Uses

CBT has been used to reduce some symptoms of schizophrenia (generally used in conjunction with medication). CBT has shown particular success in the treatment of depression and anxiety and is often better than with medication alone. CBT can be used to treat anxiety, shyness, smoking, obesity and other activities where changing a person's thinking can lead to changes in behaviour.

How it Works

CBT is based on the idea that our emotions, thoughts and behaviours are all linked together. In order to change our behaviour when need to change our emotions and thoughts. If we replace negative thinking patterns with positive ones, then positive behaviours should follow. Many different models and CBT techniques have been developed by people to help treat patients.

Rational Emotive Behaviour Therapy

Rational Emotive Behaviour Therapy is a CBT approach developed by Albert Ellis (1957, 1962). He proposes that each of us hold a unique set of assumptions about ourselves and our world that serve to guide us through life and determine our reactions to the various situations we encounter. Unfortunately, some people's assumptions are largely irrational, guiding them to act and react in ways that are inappropriate and that prejudice their chances of happiness and success. Albert Ellis calls these **basic irrational assumptions**.

A major aid in Ellis' cognitive therapy is called the ABC Technique of Irrational Beliefs.

- **A - Activating Event or objective situation** - the objective situation that leads to some type of high emotional response or negative dysfunctional thinking.
- **B – Beliefs** - the client writes down the negative thoughts that occurred to them.
- **C – Consequence** - the negative feelings and dysfunctional behaviours that result.

Ellis believes that it is not the activating event (A) that causes negative emotional and behavioural consequences (C), but rather that a person interprets these events unrealistically and therefore has an irrational belief system (B) that helps cause the consequences (C).

Therapy therefore focuses on shifting B, the irrational beliefs into more rational beliefs.

Beck's Cognitive Therapy

Beck's (1967) system of therapy is similar to Ellis's, but has been most widely used in cases of depression. Beck believes that a person's reaction to specific upsetting thoughts may contribute to abnormality. As we confront the many situations that arise in life, both comforting and upsetting thoughts come into our heads. Beck calls these unbidden cognition's automatic thoughts.

When a person's stream of automatic thoughts is very negative you would expect a person to become depressed (I'm never going to get this essay finished, my girlfriend fancies my best friend, I'm getting fat, I have no money, my parents hate me - have you ever felt like this?). Quite often these negative thoughts will persist even in the face of contrary evidence.

Beck identified three mechanisms that he thought were responsible for depression:

- the cognitive triad of negative automatic thinking
- negative self-schemas
- errors in logic (i.e. faulty information processing).

Therapy focuses on improving beliefs about one's self in all three mechanisms of thought.

Strengths of CBT

- Model has great appeal because it focuses on human thought.
- Cognitive theories lend themselves to testing. When experimental subjects are manipulated into adopting unpleasant assumptions or thought they became more anxious and depressed (Rimm & Litvak, 1969).
- Many people with psychological disorders, particularly depressive, anxiety, and sexual disorders have been found to display maladaptive assumptions and thoughts (Beck et al., 1983).
- Cognitive therapy has been very effective for treating depression (Hollon & Beck, 1994), and moderately effective for anxiety problems (Beck, 1993).

Limtations of CBT

- The precise role of cognitive processes is yet to be determined. It is not clear whether faulty cognitions are a cause of the psychopathology or a consequence of it.
- Lewinsohn (1981) studied a group of participants before any of them became depressed, and found that those who later became depressed were no more likely to have negative thoughts than those who did not develop depression. This suggests that hopeless and negative thinking may be the result of depression, rather than the cause of it.
- Ethical issues – It is a directive therapy aimed at changing cognitions sometimes quite forcefully. For some, this may be considered an unethical approach.

ACTIVITY 3

1. Refer to the model below

EVENT → THOUGHTS → FEELINGS → BEHAVIOURS

How can this model be applied to treat patients in cognitive behaviour therapy who are displaying negative behaviours?

2. Outline two strategies that could be used in cognitive behaviour therapy to help clients identify and modify negative thoughts.

Answers to activities contained in this workbook

ACTIVITY 1

- To help improve Adam's attention in class a teacher set up a token economy reward system. Every time Adam made demonstrated good listening skills while she was talking she put a star on his chart. After 10 stars Adam got 2 minutes free time to play with a toy on the mat.

- c) Identify the following components of the system the teacher set up.

Target behaviour – Attention, as demonstrated by good listening skills when the teacher is speaking

Tokens – Stars on a chart

Back-up reinforcer – 2 minutes play time with a toy on the mat

Reinforcement schedule – Every time

Rate of token exchange for reward – 10 stars

- d) After a several days Adam was responding well and achieving stars very quickly. How could the teacher modify the system she set up to maintain Adam's good behaviour but make it harder for him to reach rewards? She could make it that he needs to get 20 stars before the back-up reinforcer is rewarded.

ACTIVITY 2

- Explain how a psychologist might use systematic desensitisation to treat a person suffering from a fear of dogs.
 - First teach relaxation and breathing techniques.
 - Patient create a personal fear hierarchy of the least to most fear provoking things involving a dog.
 - Patient is exposed (either actual or virtually) to first item on fear hierarchy and uses relaxation techniques to manage to deal with the situation.
 - Once able to cope with first level, move up to next level and repeat process.
 - Keep moving gradually up hierarchy until finished.

ACTIVITY 3

1. Refer to the model below

EVENT → THOUGHTS → FEELINGS → BEHAVIOURS

How can this model be applied to treat patients in cognitive behaviour therapy who are displaying negative behaviours?

The events can't be changed.

Thoughts can be changed.

Because how we think about an event will affect our feelings and in turn our behaviour, if we shift our thoughts we can fix the behaviours.

2. Outline two strategies that could be used in cognitive behaviour therapy to help clients identify and modify negative thoughts.
 - Patient keep diary to become more aware of thoughts.
 - Get patient to challenge negative thoughts and look at contradictor evidence for their negative thoughts.
 - Check patients for “jumping to conclusions” or “mind reading” situations
 - Get patient to predict how likely the negatives will actually happen and question for truth.
 - Explore with patient how bad things could get is the negative things actually happened and question for truth.
 - Role play and try out new techniques for dealing with situations with new thinking.

Year 12 SELF – Cognition

Modifying Behaviours

Textbook references, questions and additional resources

If you have access to *Nelson Psychology WA ATAR Unit 3&4*, complete the following reading and questions:

- read pages 35-39
- complete end of chapter questions on page 41 - MCQ 10 and SAQ 4-5.

If you have access to *Nelson Psychology WA ATAR Unit 3&4 Student Workbook*, complete the following reading and questions:

- pages 46-51

Check out the additional reading in the following links to help you clarify your understanding and complete questions.

- Example of Systemic Desensitisation
<https://www.youtube.com/embed/IMZ5o2uruXY>
- Systematic Desensitisation <https://www.simplypsychology.org/Systematic-Desensitisation.html>
- The reward pathway
<http://learn.genetics.utah.edu/content/addiction/rewardbehavior/>

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Exam Practice Questions

Answer the following questions taken from ATAR Psychology 2017 exam paper

Source: School Curriculum and Standards Authority, Psychology 2017 ATAR Examination

<https://senior-secondary.scsa.wa.edu.au/further-resources/past-atar-course-exams/psychology-past-atar-course-exams>

Question 6

(16 marks)

Caleb went to see a psychologist for help to overcome his fear of birds. Caleb told the psychologist that he was afraid of all birds because when he was young a magpie swooped down on his head and pecked him. He now avoided all birds because he believed that they would hurt him.

- (a) (i) Outline **four** steps that the psychologist would use in applying systematic desensitisation to help Caleb overcome his fear of birds. (4 marks)

One: _____

Two: _____

Three: _____

Four: _____

- (ii) The psychologist could also use Cognitive Behavioural Therapy (CBT) to help Caleb change his negative beliefs about birds. A and B are both examples of positive beliefs about birds.

A. Birds will not hurt me.

B. Birds that are in cages will not hurt me.

Identify which belief would be appropriate to promote through CBT and state a reason for your response. (2 marks)

Answers and Marking Key

Question 6 taken from the 2017 ATAR Psychology 12 paper

Source: School Curriculum and Standards Authority, Psychology 2019 ATAR Examination

<https://senior-secondary.scsa.wa.edu.au/further-resources/past-atar-course-exams/psychology-past-atar-course-exams>

Question 6

(16 marks)

- (a) (i) Outline **four** steps that the psychologist would use in applying systematic desensitisation to help Caleb overcome his fear of birds. (4 marks)

Description	Marks
Clients are asked to write a list of their fears from least to most fearful/develop a fear hierarchy	1
Clients are taught relaxation techniques	1
Client is introduced to their lowest fear, while practicing their relaxation techniques	1
Once the client is comfortable with the lowest fear on their hierarchy, they progress up the hierarchy, being exposed to each fear while practicing relaxation techniques	1
Total	4

- (ii) The psychologist could also use Cognitive Behavioural Therapy (CBT) to help Caleb change his negative beliefs about birds. A and B are both examples of positive beliefs about birds.

A. Birds will not hurt me.

B. Birds that are in cages will not hurt me.

Identify which belief would be appropriate to promote through CBT and state a reason for your response. (2 marks)

Description	Marks
B	1
Because A is not a realistic belief, as some birds might hurt him; B is more realistic	1
Total	2