2b. Learning - Observational Learning

- Through observation, we can acquire new behaviours without having to personally experience them.
- Responses acquired by observing what others do include physical routines such as a particular dance style.
- Watching the actions of others can help us to learn skills such as how to drive a car.
- It is not only responses in the form of behaviour that are acquired by observing others. Many of our attitudes, values and beliefs are also the products of observing others.

Observational learning: occurs when someone uses observation of a model's actions and the consequences of those actions to guide their future actions.

- A *model*: who or what is being observed and may be live or symbolic.

Live and symbolic models:

- **A live model: a real-life person who may be demonstrating, acting out and/or describing or explaining a behaviour.**
- **A symbolic model: a real or fictional character displaying behaviour in books, movies, television programs, online and other media.**

Social learning/cognitive theory: developed by Albert Bandura

- Emphasises the importance of the environment, or 'social context', in which learning occurs.
- Social learning theory encompasses cognitive processes such as attention, memory and motivation, as well as learning processes such as conditioning, reinforcement and punishment.

According to Bandura:

Through observation we learn many behaviours, not by actually carrying out the behaviour and experiencing the consequences, but simply by watching the behaviour and its consequences being experienced by someone else.

Vicarious conditioning:

- **During vicarious conditioning: the individual watches a model's behaviour being either reinforced or punished, and then subsequently behaves in exactly the same way or in a modified way, or refrains from the behaviour, as a result of what they have observed.**
- Bandura's experiments demonstrated that both classical and operant conditioning can occur *vicariously* through observational learning.

Vicarious reinforcement: increases the likelihood of the observer behaving in a similar way to a model whose behaviour is reinforced.

e.g. a student who sees another student being allowed to leave a class early after correctly finishing all their work may be more inclined in another class to model the behaviour and respond in a similar way if they consider leaving class early a desirable outcome (a reinforcer).

Vicarious punishment: occurs when the likelihood of an observer performing a particular behaviour decreases after having seen a model's behaviour being punished.

e.g. a student may observe someone else in class receiving detention for calling out without permission. The observer is likely to refrain from that behaviour in the future if they view detention as an undesirable outcome (a punisher).

Bobo doll experiment:

- Bandura was interested in the manifestation of aggression in human behaviour.
    - In the first series of studies children observed a live actor adult model playing with a 90 cm tall ‘Bobo doll’.
    - The second series of studies investigated whether filmed models were as influential as lives one.
- Bandura (1965) used four-year-old pre-schoolers as participants.
- The children were allocated one of three groups (in equal numbers of boys and girls) and watched one of three movies.
- Each movie showed an adult model punching, hitting, kicking and verbally abusing a large air-inflated BoBo doll.
- https://www.youtube.com/watch?v=zerCK0lRjp8

'Bobo Doll Experiment' results:

Trends:

- Boys more aggressive than girls
- Children show a higher mean number of aggressive responses when they are rewarded as compared to when they are not rewarded
- The mean number of aggressive responses made increases as the child is rewarded, even in the no consequence condition. This indicates that the consequences of a behaviour do not need to be seen to be learnt by the observer.

Acquisition vs performance:

- **Bandura’s experiments showed that: if someone observes a model’s behaviour and does not perform the actions they have observed, it does not mean that the behaviour was not learned.**

- Although an individual may make no observable response to a behaviour performed by a model, the acquisition of the modelled response in cognitive form has still occurred and can be elicited with an appropriate reinforcer.
- Observed behaviours most likely to be performed are the behaviours that will be reinforced.

Cognitive representations:

- Bandura proposes in his social learning theory that when observers pay attention to something going on around them, they form cognitive representations (mental images or codes) of what they observe.
- What they have learned, therefore, is not so much a response but a cognitive or mental representation of a response.

Bandura's experiment:

According to Bandura's social learning theory, observational learning involves a sequence of processes called

- Attention
- Retention
- Reproduction
- Motivation
- Reinforcement

Attention

- In Bandura's 1965 BoBo doll experiment, the children **attended** to (watched) the models' aggressive behaviour.
- In order to learn through observation, we must pay attention to or closely watch a model's **behaviour** and the **consequences.**
- Attention may be influenced by several factors. These include:
    - the perceptual capabilities of the observer

    - the motivation and interest level of the observer
    - the situation in which the behaviour is being observed
    - the kinds of distracters that are present
    - the characteristics of the model, such as attractiveness.
- Model characteristics that influence attention
    - the model is perceived positively, is liked and has a high status
    - there are perceived similarities between features and traits of the model and the observer, such as age and sex
    - the model is familiar to the observer and is known through previous observation
    - the model's behaviour is visible and stands out clearly against other 'competing' models
    - the model is demonstrating behaviour that the observer perceives themselves as being able to imitate.

Retention

- Having observed the model, we must be able to **remember** the model's behaviour.
- Responses learned by modelling are often not needed until **sometime after** they have been acquired.
- We need to **store in memory a mental representation** of what we have observed, and the more meaningful we can make that representation, the more accurately we will be able to replicate the behaviour when necessary.

Reproduction

- When the model's behaviour has been closely attended to and retained in memory, we can attempt to **reproduce**, or imitate, what has been observed.
- We must, however, **have the ability to put into practice** what we observed.

- We must have the potential to be competent enough to **develop the necessary skills** to imitate the behaviour.

Motivation

- The observer must also be motivated to perform the behaviour; that is, **they must want to** reproduce what was observed.

Reinforcement

- Reinforcement influences the motivation to reproduce the observer behaviour and increases the likelihood of reproduction.
- **External reinforcement** is comparable to learning by consequences (e.g. praise or money).
- **Vicarious reinforcement** occurs indirectly by observing the modelled behaviour being reinforced without personally experiencing the reinforcement.
- **Self-reinforcement** occurs when we are reinforced by meeting certain standards of performance we set for ourselves.