Approaches & Research Methods in Psychology

The Activity
To explore different approaches and research methods in psychology.
To evaluate the suitability of particular methods for two research questions:
1) how might we study the alleged relationship between the amount of marijuana smoked and short-term memory?
2) how might we study whether owning a pet confers an advantage to one’s health?

This activity involves reading material from a variety of web pages and taking notes. It also involves considering how we might attempt to investigate two research questions relating to topics of interest to psychologists.

There are several ways of communicating what you have learned from this activity. In this response, it is suggested you produce a series of information sheets from your notes; one summarising approaches/perspectives in psychology, one outlining research methods in psychology, one differentiating different types of experiments and one providing examples of how we might design an experiment to investigate each of the research questions in the box above. Examples of information sheet structure are provided in this response together with some issues you may wish to consider. Alternatively, you could choose an entirely different outcome, for example, constructing a PowerPoint presentation.

I hope that this activity has broadened your knowledge of approaches and research methods.
Approaches in Psychology

Modern psychology is concerned with the study of many topics relating to mental processes and behaviour. There are various approaches or perspectives employed with regard the explanation of human behaviour. A particular problem may be explored via a variety of perspectives. For example, memory and aggression can be studied and explained using biological, cognitive, social and psychodynamic frameworks. There is no ‘best approach’ in psychological research, however, depending on the nature of the research question, one perspective may be more appropriate than another.

This information sheet will briefly address the main approaches in psychology.

**The Biological Perspective**

Biological psychology is concerned with the study of the biological bases of behaviour and incorporates the study of brain physiology, anatomy and biochemistry. This perspective is also referred to as biopsychology or physiological psychology and contributes to the field of neuroscience. Of all the approaches in psychology, biological psychology has seen the greatest advances over the past twenty years or so. Technological breakthroughs in brain scanning and genetics have significantly increased our understanding of the biological and biochemical basis of normal and abnormal cognition and behaviour, in health and following damage and disease.

**The Behavioural Perspective**

Behavioural psychology is particularly concerned with learned behaviours. Together with the psychoanalytic and gestalt schools, it was very important in the early twentieth century study of psychology. Famous behaviourists include Ivan Pavlov (classical conditioning), Burrhus Skinner (operant conditioning) and John Watson (the development of introspective methods). With the advent of the cognitive revolution in the 1950s, behaviourism lost much of its influence. The behavioural perspective is today concerned with how behaviours are learned and, in health settings, how certain behaviours can be modified in the treatment of a range of illnesses.

**The Cognitive Perspective**

Cognitive psychology, a term introduced in 1967, is concerned with the study of mental processes such as memory, thinking, problem solving, decision-making and language. Like the biological perspective, the cognitive approach has seen tremendous growth over the past two decades. Recently, aspects of cognitive psychology and biological psychology have come together in the form of cognitive neuroscience. This field is concerned with the study of the biological mechanisms underlying cognitive processes.

**The Psychodynamic Perspective**

The psychodynamic perspective concerns the study and theory of how psychological factors or forces, both conscious and unconscious, shape and influence human behaviour. This perspective is rooted in psychoanalysis and the work of Sigmund Freud. The psychodynamic perspective places particular emphasis on unconscious mental processes and the experiences of early childhood when explaining normal and abnormal human behaviour. The new field of cognitive psychodynamics links neuroscience and cognition with psychodynamics to provide a more structured explanation of psychodynamic constructs.

**The Evolutionary Perspective**

Evolutionary psychology is a relatively new perspective which is concerned with how principles of evolution, such as natural selection, shape psychological phenomena such as emotion, memory and thinking. This perspective suggests that humans have acquired and inherit specific mental capacities for acquiring behaviours such as language, making language acquisition a near-automatic process. Other related behaviours such as reading and writing are associated with no such inherent advantage.

**The Cross-Cultural Perspective**

Cross-cultural psychology is another relatively new perspective which is concerned with the variability of mental functions and behaviour across cultures. Topics studied include emotion, self-conception, cognition, child-rearing, personality and psychopathology (anxiety, depression and psychosis).

**The Humanistic Perspective**

Humanism arose during the 1950s as a reaction to behaviourism and psychoanalysis. Humanism is particularly concerned with the meaning of behaviour and rejects determinism. The work of humanists such as Carl Rogers and Abraham Maslow emphasised that human beings should not be reduced to components and that motivation exerts a significant influence on thought and behaviour. Humanistic therapy generally attempts to develop a stronger and more healthy sense of self, referred to as self-actualisation.
Research Methods in Psychology

Psychological research attempts to answer questions through careful systematic observation and data collection. Answers to the questions posed can then influence further research and aid in our subsequent predictions of events and behaviour. A wide variety of methods are employed to conduct such research.

Using a similar structure to the previous Approaches in Psychology page, briefly summarise the psychological research methods – the category headings below might be appropriate, but you may choose a different set of headings.

Types of Research
Causal Relationships
Theory & Hypothesis
Effects of Time
Correlational Relationships

Experiments in Psychology

Briefly summarise the simple experiment and correlational studies.

The Simple Experiment
Correlational Studies

Research Questions

Evaluate the suitability of particular methods for two research questions:
1) how might we study the alleged relationship between the amount of marijuana smoked and short-term memory?
2) how might we study whether owning a pet confers an advantage to one’s health?

An example of different research strategies is provided for the first question, leaving you to tackle Pet ownership and health status.

Marijuana and short-term memory

The question is deliberately quite vague and could be interpreted in a number of ways. Are we talking about the number of occasions an individual smokes marijuana? Or the strength of the marijuana smoked? Are we concerned about memory encoding, memory recall or both? Investigation of such a question might best be served by the experimental method. The amount of THC in marijuana determines the drug’s strength; THC has also been demonstrated to impair memory, particularly short-term memory.

One approach would be to explore the effect of different amounts of THC on performance of a short-term memory task. We might employ a 3-condition design. Participants in condition 1 each receive 5mg of THC, participants in condition 2 receive 10mg, individuals in condition 3 receive 15mg (actual drug dosages may differ from those above). A control condition may also be introduced, participants in which receive 0mg of THC. Participants could be asked to remember a list of words, or some other memory-related activity depending on which aspect of memory (recognition, recall) was of interest. This learning might occur prior to, during or after to the drug administration. Procedural and design considerations such as these must justifiable by the researcher.

Participants would then be asked to recall the information that they had learned. Data would be compared across the three conditions of the experiment, in order to determine whether the results support the hypothesis – which might be that the greater the dosage of THC the greater the memory deficit. Of course, the ethics of such an experiment would need to be thoroughly considered.

Alternatively, if we were concerned with marijuana use and memory over a period of time we might choose to design a questionnaire to be completed by habitual marijuana users. Details such as the amount of marijuana smoked and frequency of intake would be collected. Such a questionnaire would likely ask pertinent questions relating to any perceived memory deficits. How should such questions be phrased? What other information might be of use? As such questionnaire data is subjective and to a large extent dependent on the self-insight of the individual completing the survey is such a research method less reliable than more objective experimental data?