INTRODUCTION TO PSYCHOLOGY PSYC104

Chapter 1

Foundations

At the end of this Chapter you should be able to:

- Understand the scope of psychology
- Different perspectives in psychology
- The scientific research method in psychology

Different Approaches in Psychology

Psychology is the scientific study of our thoughts, feelings and behaviours. An approach or perspective in psychology is a particular view as to why, and how, it is we think, feel, and behave as we do.

Behavioural

Behavioural Psychology is basically interested in how our behaviour results from the stimuli both in the environment and within ourselves.

Biological

The biological approach believes us to be as a consequence of our genetics and physiology. It is the only approach in psychology that examines thoughts, feelings, and behaviours from a physical point of view.

Evolutionary

Evolutionary psychology focus on how evolution has shaped the mind and behaviour.

Developmental

Developmental psychology, also known as Human Development, is the scientific study of progressive psychological changes that occur in human beings as they age.

Psychodynamic

Sigmund Freud was the founder of the psychodynamic approach to psychology. This school of thought emphasized the influence of the unconscious mind on behaviour.

Cultural Multicultural

Focus is on the role of social and cultural factors and especially on differences between cultural, ethnic, gender, sexual preference and racial groups.

Cognitive

Focus on our information processes of perception, attention, language, memory, and thinking, and how they influence our thoughts, feelings and behaviours.

Breadth of Content

Psychology: the study of ..

why we do what we do;

why we feel the way we feel;

why we think as we think;

Human behaviour

What is unique about humans?

What do we have in common with other species?

How do we differ from each other?

How did we come to be who we are?

Humans alone and in context:

How do we act when we are alone?

How do we act when we are with one other person?

How do we act when we are in a group?

Breadth of Content
Psychology covers a variety of topics:

1. The workings of the living brain:

metabolic activity gives clues about brain /behaviour relationships

no such thing as "memory centre" or "reading centre"

brain regions: work in coordination

2. Memory:

Studied as function, not "brain region"

"Eyewitness" memory: window into complexity of topic

Common areas of study:

errors of commission

errors of omission

3. Innate Capacities

Achievement through experience

We remember what has happened and alter behaviour accordingly

Achievement through innate capacity

Even seen in infants in areas such as arithmetic (!)

4. Displays and Communication

Social topic (Takes two to communicate)

Verbal

Language, sound

Display

Body structure (tail feathers in peacock), behaviour or posture (smile or folded arms)

5. Social Behaviour in Humans

Varied as compared to most animals

Flexible as compared to most animals

Strategic and careful, but also unconscious and irrational

Changes when social behaviour occurs around more than one person (large groups, crowds, mobs)

Why does social behaviour change so much under these circumstances?

Good question for psychology

Diversity of Perspectives

Many perspectives used to study the breadth of psychology's content

Example: Different perspectives that can be brought to bear on a single phenomena: EATING

To study EATING, we can look at:

Biological Basis for eating

Cultural Influences on eating

Eating and the social world

Eating Disorders

Cognitive Control over eating

The Development of Food Preferences

What is it That Unites Psychology?

Two themes give the field coherence:

Theme 1: The TYPES of QUESTIONS psychologists ask

Why do we do what we do?

Why do we think what we think?

Why do we feel what we feel?

Theme 2: The WAYS we ANSWER those questions

The Scientific Method

Different Research Methods used in Psychology

The goals of psychological studies are to describe, explain, predict, and perhaps influence mental processes or behaviour. In order to do this, psychologists utilize the scientific method to conduct psychological research. The scientific method is a set of principles and procedures that are used by researchers to develop questions, collect data, and reach conclusions.

Research Methods

Research methods fall into two "design" categories in psychology. Research methods that are experimental in design include the laboratory, field and quasi-experiment. Non-experimental methods include the observational, survey, interview and case study methods.

Experimental methods produce measurable quantitative data. Non-experimental methods can sometimes give you quantitative data but information is more likely to be descriptive or qualitative in nature. The type of data produced by a particular method affects the validity and reliability of the research results.

Observation

Perhaps the simplest form of research is (Naturalistic) Observation.

It means, observing behaviour in their natural environment. It often involves counting behaviours, such as number of aggressive acts, number of smiles, etc.

Correlational Studies

Correlation means relationship, so the purpose of a correlational study is to determine if a relationship exists, what direction the relationship is, and how strong it is. It cannot make any assumptions of cause and effect (no causation).

In Correlational Studies, the relationship is between two variables. There are three possible results of a correlational study: a positive correlation, a negative correlation, and no correlation. These are usually shown in graphs.

The correlation coefficient is a measure of correlation strength and can range from –1.00 to +1.00.

Positive Correlations: Both variables increase or decrease at the same time. A correlation coefficient close to +1.00 indicates a strong positive correlation.
Negative Correlations: Indicates that as the amount of one variable increases, the other decreases (and vice versa). A correlation coefficient close to -1.00 indicates a strong negative correlation.
No Correlation: Indicates no relationship between the two variables.

Strong linear correlation: The closer the number is to 1 or -1, the stronger the correlation, or the stronger the relationship between the variables.

Weak linear correlation: The closer the number is to 0, the weaker the correlation

Experimental Studies

Unlike correlational research methods or psychological tests, experiments can provide information about cause-and-effect relationships between variables. In an experiment, a researcher manipulates or changes a particular variable under controlled conditions while observing resulting changes in another variable or variables.

Variable: A factor or element that can change in observable and measurable ways.

Independent Variable (IV) – the variable that is manipulated by the experimenter (input variable)

Dependent Variable (DV) – the outcome variable (results of the experiment)

The control group: made up of individuals who are randomly assigned to a group but do not receive the treatment. The measures takes from the control group are then compared to those in the experimental group to determine if the treatment had an effect.

The experimental group: made up of individuals who are randomly assigned to the group and then receive the treatment. The scores of these participants are compared to those in the control group to determine if the treatment had an effect.

Experimental Hypothesis: By defining our variables that we will use to test our theory we derive at our hypothesis, which is a testable form of a theory that guess about the possible relationship between two or more variables.

The researcher manipulates the independent variable and observes the dependent variable. The dependent variable may be affected by changes in the independent variable. In other words, the dependent variable depends (or is thought to depend) on the independent variable.

Example

Hypothesis: We can increase the success of students in Mathematics course, by the use of praisal motivation technique.

First, two groups should be formed, which are equal to each other in terms of age, intelligence, education and math competence; Group A and Group B

Then, the same instructor, teaches the same Math topics to each group, with the same method.

The students in Group A are praised for their work, whereas the students in Group B do not receive any words of motivation at all...

A couple of days later the same test is given to both groups, and the results show that students in Group A (praised) are more successful than the students in group B (not praised)

For this example:

Dependant variable is ....

The success level of the students

Independent variable is ....

Praisal

The Experimental group is...

Group A; which was motivated by praisal

The Control group is...

Group B; which did not receive any praisal

Comparison

OBSERVATION

Advantages

high degree of realism because are in natural environments

data on large number of variables can be collected at the same time

researcher doesn't have as great an impact on the study as he/she may in other strategies

Disadvantages

variables not manipulated by the researcher

unable to infer causality

measurement of variables less precise than in laboratory

CORRELATIONAL STUDIES

Advantages

shows if two or more variables are related

allows general predictions

used both in natural and laboratory settings

Disadvantages

Does not permit identification of cause and effect

EXPERIMENTAL STUDIES

Advantages

allows researcher to control the situation

Permits researcher to identify cause and effect

Disadvantages

situation is artificial and can not be always generalised to the real world

sometimes difficult to avoid experimenter effects