



VCE PSYCHOLOGY 2005–2008

ETHICAL PRINCIPLES, RESEARCH METHODS AND STATISTICS IN THE STUDY DESIGN

ETHICAL PRINCIPLES

A study of ethical principles applied to psychological research is integrated throughout Units 1–4 of the study design. Reference is made to the application of particular ethical principles as appropriate to the Areas of study.

Key Knowledge / Key Skills in the Study Design	Study Design Accreditation 2005–2008	Old Study Design
Ethical principles in the conduct of psychological research Describe ethical principles applied to the conduct of research	Unit 1 Area of Study 1 and Unit 3 Area of Study 2 Unit 1 Area of Study 1	<i>Unit 1 Area of Study 1 and Unit 4 Area of Study 3</i> <i>Unit 1 Area of Study 1 and Unit 4 Area of Study 3</i>
Ethical principles related to studies of conformity or obedience	Unit 1 Area of Study 2	N/A
Ethical principles associated with psychological studies of the nervous system Discuss the research design methods and ethical principles of psychological studies of the nervous system	Unit 2 Area of Study 1 Unit 2 Area of Study 1	N/A N/A
Ethical principles in testing for individual differences Evaluate the ethical principles related to the use of intelligence or personality tests	Unit 2 Area of Study 2 Unit 2 Area of Study 2	N/A <i>Unit 2 Area of Study 3</i>
Ethical principles appropriate to conducting questionnaires Use appropriate ethical standards in the design of a briefing statement and consent form used to gather primary data	Unit 2 Area of Study 3 Unit 2 Area of Study 3	N/A

Key Knowledge / Key Skills in the Study Design	Study Design Accreditation 2005–2008	Old Study Design
Ethical principles in the conduct of brain research	Unit 3 Area of Study 1	<i>Unit 2 Area of Study 2</i>
Investigate the use, protection and security of participant confidentiality, voluntary participation and informed consent in psychological research	Unit 3 Area of Study 1	<i>Unit 4 Area of Study 3</i>
Ethical principles in the conduct of psychological research related to sleep	Unit 3 Area of Study 3	N/A
Ethical principles in the conduct of psychological research related to memory	Unit 4 Area of Study 1	N/A
Ethical issues in conditioning behaviour including Watson's 'little Albert' experiment	Unit 4 Area of Study 2	<i>Unit 4 Area of Study 2</i>
Ethical considerations	Unit 4 Area of Study 3	<i>Unit 4 Area of Study 3</i>
Apply appropriate ethical principles in the conduct of psychological research	Unit 4 Area of Study 3	<i>Unit 4 Area of Study 3</i>
Community Standards	NHMRC 2001 NPP pages 8–9	<i>Not as detailed</i> <i>Pages 8–9</i>

RESEARCH METHODS

A study of the research methods used in psychological research is integrated throughout Units 1–4 of the study design. Reference is made to the application of particular research methods as appropriate to the Areas of study.

Key knowledge / Key skills in the Study Design	Study Design Accreditation 2005–2008	Old Study Design
Steps involved in psychological research	Unit 1 Area of Study 1	<i>Unit 1 Area of Study 1</i>
Reliability and validity in psychological research	Unit 1 Area of Study 1	
Describe the research methods involved in psychological research	Unit 1 Area of Study 1	<i>Unit 1 Area of Study 2 and Unit 1 Area of Study 3</i>
Use and interpret graphical representations of data in psychological research	Unit 1 Area of Study 2	<i>Unit 1 Area of Study 1</i>
Use secondary data to explain the effects of sample size on research conclusions in the studies of human development	Unit 1 Area of Study 3	<i>Unit 2 Area of Study 1 (describe the research methods, evaluate past research in view of recent findings)</i>
Discuss the research design methods and ethical principles of psychological studies of the nervous system	Unit 2 Area of Study 1	N/A
Analyse data from brain research to establish their value and limitations of the methods	Unit 3 Area of Study 1	<i>Unit 2 Area of Study 2 (summarise methods currently used to study the brain)</i>
Research methods in visual perception, including use of participant selection, random and stratified sampling, participant allocation; control and experimental groups	Unit 3 Area of Study 2	<i>Unit 4 Area of Study 3 (range of experimental designs)</i>
Design a research investigation to demonstrate the use of participant selection and allocation, and control and experimental groups	Unit 3 Area of Study 2	N/A

Key knowledge/Key skills in Study Design	Study Design Accreditation 2005–2008	Old Study Design
<p>Research designs used to minimize the effects of extraneous variables, including repeated measures design, matched-participants design, independent-groups design</p> <p>Placebo effects, experimenter effects, single blind and double blind procedures</p> <p>Explain ways to minimize extraneous variables in experiments</p>	<p>Unit 3 Area of Study 3</p> <p>Unit 3 Area of Study 3</p> <p>Unit 3 Area of Study 3</p>	<p><i>Unit 2 Area of Study 4</i> <i>Unit 4 Area of Study 3</i></p> <p><i>Unit 4 Area of Study 3</i></p> <p><i>Unit 4 Area of Study 3</i></p>
<p>Formation of operational hypotheses and interpretation of p values</p> <p>Develop an operational hypothesis related to a memory task explaining the selection of a test for significance with probability levels ($p < 0.01$ and $p < 0.05$)</p>	<p>Unit 4 Area of Study 1</p> <p>Unit 4 Area of Study 1</p>	<p><i>Unit 4 Area of Study 3</i></p> <p><i>Unit 4 Area of Study 3</i></p>
<p>Formation of operational hypotheses</p> <p>Research design methods</p> <p>Develop a hypothesis</p> <p>Select and apply an appropriate research method</p>	<p>Unit 4 Area of Study 3</p> <p>Unit 4 Area of Study 3</p> <p>Unit 4 Area of Study 3</p> <p>Unit 4 Area of Study 3</p>	<p><i>Unit 4 Area of Study 3</i></p> <p><i>Unit 4 Area of Study 3</i></p> <p><i>Unit 4 Area of Study 3</i></p> <p><i>Unit 4 Area of Study 3</i></p>

STATISTICS

A study of statistics used in psychological research is integrated throughout Units 1–4. Reference is made to the application of particular statistics as appropriate to the Areas of study.

Key Knowledge / Key Skills in the Study Design	Study Design Accreditation 2005–2008	Old Study Design
Independent and dependent variables Use examples from research studies to identify and explain the differences between independent and dependent variables	Unit 1 Area of Study 1 Unit 1 Area of Study 1	<i>Unit 1 Area of Study 1</i> <i>Unit 1 Area of Study 1</i>
Qualitative and quantitative data, scales of measurement (nominal, ordinal, interval, ratio) Descriptive and inferential statistics in the study of social behaviour, including line graphs, box and whiskers plots, scatter plots, histograms and frequency distributions (polygons) Collect quantitative data and use it to determine mean, median and mode Use and interpret graphical representations of data in psychological research	Unit 1 Area of Study 2 Unit 1 Area of Study 2 Unit 1 Area of Study 2 Unit 1 Area of Study 2	<i>Unit 1 Area of Study 1</i> <i>Unit 1 Area of Study 1 and Unit 4 Area of Study 3</i> <i>Unit 1 Area of Study 1</i> <i>Unit 1 Area of Study 1</i>
Implications of sample size and population on research conclusions Use secondary data to explain the effects of sample size on research studies of human development	Unit 1 Area of Study 3 Unit 1 Area of Study 3	<i>Unit 4 Area of Study 3</i> <i>Unit 4 Area of Study 3</i>
Statistical measures of ‘normality’ and abnormality’, such as variance and standard deviation Frequency distributions to measure central tendency Use variance and standard deviation to describe normality and abnormality, with reference to either intelligence or personality tests Use primary or secondary data to construct frequency distributions in order to measure tendency showing bimodal, symmetric (bell-shaped and normal), skew (positive and negative)	Unit 2 Area of Study 2 Unit 2 Area of Study 2 Unit 2 Area of Study 2 Unit 2 Area of Study 2	<i>Unit 1 Area of Study 3</i> <i>Unit 2 Area of Study 4</i> <i>Unit 2 Area of Study 4</i> <i>Unit 2 Area of Study 4</i>

Key Knowledge / Key Skills in the Study Design	Study Design Accreditation 2005–2008	Old Study Design
Statistical significance of correlation based on strength and sample size	Unit 2 Area of Study 3	<i>Unit 4 Area of Study 3</i>
Use correlation to analyse the results gathered from a student-designed questionnaire	Unit 2 Area of Study 3	N/A
Explain the strengths and limitations of random and stratified sampling	Unit 3 Area of Study 2	<i>Unit 4 Area of Study 3</i>
Collection and interpretation of data	Unit 4 Area of Study 3	<i>Unit 4 Area of Study 3</i>
Statistical analysis	Unit 4 Area of Study 3	<i>Unit 4 Area of Study 3</i>
Apply appropriate statistical measures	Unit 4 Area of Study 3	<i>Unit 4 Area of Study 3</i>

N/A: Not applicable.