A Level Psychology

Methodologies 2 & 4, part two Knowledge organiser

Description of Methodology (AO1)	Strengths of Methodology (AO3)	Weaknesses of Methodology (AO3)
CORRELATION: used to analyse the relationship or association between two continuous variables (co-variables). • A scatter diagram/scatter graph can be used to illustrate correlations. • The closer the coefficient is to 0, the weaker the coefficient. The closer the coefficient is to 1 (be that +1 or -1) the stronger it is.	• Shows both the direction and strength of a relationship which can then be used to make predictions about behaviour. • Can be used when experiments are inappropriate.	• Only shows whether there is a relationship; not how or why co variables are related. • Difficult to establish cause and effect using a correlation.
CASE STUDY: in-depth study of a unique individual, small group or event. • Uses many different research methods, such as interviews, questionnaires, or observations in order to get the required depth. • Most data collected is qualitative, but it can sometimes be quantitative. • It is a holistic study and is usually longitudinal.	• Produces rich qualitative data which is of high ecological validity because it is a study of real-life situation. • Allows researchers to study cases they couldn't practically or ethically manipulate in an experiment.	• Researcher bias; researchers can become too involved and lose their objectivity. • It is difficult to generalise findings beyond the individual/group studied; the sample is too small (low population validity).
SELF-REPORTS: methods that involve the participant reporting information about themselves. They can include interviews, questionnaires, inventories, diaries.	• Self-reports offer an insight into why people behave as they do, so there is less need for researchers to guess reasons for behaviours. • Qualitative information can be gathered.	• Possible risk of social desirability bias. • People may not be able to recall accurately, especially if self-report method asks for details over an extended period.
QUANTITATIVE DATA: data that can be measured numerically by the psychologist, so that statistical analysis can be completed e.g. scores on an IQ test.	• Data is easy to analyse. • Easier to collect data from a large group of participants.	• Loses the 'human' level of behaviour. • Offers a shallow view of behaviour.
QUALITATIVE DATA: a type of data that can be observed, but not measured numerically. It usually takes the form of words, thoughts and feelings, and is difficult to analyse, e.g. a participant's feelings.	• Can offer a more individualised, 'human' view of behaviour. • Provides in-depth, detailed data.	• Can be difficult to analyse collected data. • Data tends to come from a limited range of people.
PRIMARY SOURCES: information/data that are directly collected by the researcher first-hand e.g. they collect data through a questionnaire, experiment, interviews etc. for their research.	• The researcher can control the format in exactly how data is collected; it will specifically relate to the aims of the research.	• Data collected may lack validity due to social desirability or demand characteristics.
SECONDARY SOURCES are information sources/data that have not been directly collected/created by the researcher e.g. use of methods such as a content analysis of existing data, or literature reviews.	• Data produced without the 'participant' knowing the artefact would be used in research could be more valid.	• The researcher can't control the format of how the data is produced or collected.

A Level Psychology
Methodologies 2 & 4, part two Knowledge organiser

Description of Methodology (AO1)	Strengths of Methodology (AO3)	Weaknesses of Methodology (AO3)
CAT SCANS: set of x-rays combined together to form 2D or 3D images of the area of the brain that is being scanned. • Before the x-rays are taken, radioactive dye is injected into the patient then they are placed in the cylindrical CAT scan machine. • CT scans use a series of X-ray beams passed through the head, creating cross-sectional images of the brain showing the structure, but not the function.	• High quality images, better than those produced by x-ray alone. • They can reveal structures in the brain that appear abnormal e.g. tumours.	• Only provide a researcher with the structure of the brain, not the electrical activity of the brain. • Exposure to radiation: the more detailed the scan is, the more radiation an individual is exposed to.
PET SCANS: patient given a radioactive glucose (sugar). • Areas of the brain that appear to be more active are the areas which require the most glucose. • The detectors in the scanner can highlight the most active areas of the brain, allowing an in-depth image of what the brain activity is like.	• Only PET scans allow researchers to see chemical activity in the brain. • Useful for psychological research as they look at more active brain areas.	• Costly to run and maintain, meaning there is limited availability for research. • Not as precise as scans such as an MRI.
LONGITUDINAL STUDIES: a study conducted over a long period of time. • Participants are assessed on two or more occasions as they get older. • This allows the researcher to investigate any long-term effects (e.g. how memory gradually decreases with age).	• The same person is tested numerous times so participant variables are controlled. • High attrition rate because the research takes so long.	• Developmental trends can be spotted as tests are repeated at regular intervals. • Participants are more likely to be aware of the aims of the study so may show demand characteristics.
CROSS SECTIONAL STUDIES: one group of participants representing one section of society (e.g. young people or working-class people) are compared with participants from another group (e.g. old people or middle-class people).	• Relatively quick and cheap because participants only need to be tested once for comparisons. • Participants are easier to obtain because there's less pressure for them to take part, compared to having to stick with a long-term longitudinal study.	• Difficult to determine why there are differences between the two cohorts as participants cannot always be asked about the differences. • Data collected is from a snapshot in time, so it's harder to identify and analyse developmental trends in these studies.