**AQA A Level Psychology**

**Research Methods Complete Notes**

**Glossary**

- **Aim:** The act of aiming or directing at or towards a particular point or target
- **Population:** The group of people from whom the sample is drawn from
- **Sample:** A small quantity to show what the whole is like
- **Confederate:** An actor who pretends to be a part of the experiment
- **Attrition:** When someone drops out of a study
- **Longitudinal study:** A study that is continued for a years

**AS Level:**

**Variables**

- **Dependent Variable (DV):** A variable whose value depends on that of another
- **Independent Variable (IV):** A variable whose variation doesn’t depend on that of another
- **Operationalising variables:** To make them measurable
- **Extraneous Variable**
  - **Definition:** Undesirable variables that influence the relationship between the variables that an experimenter is examining
  - **How to control for them:**

<table>
<thead>
<tr>
<th>Extraneous Variable</th>
<th>Example/Explanation</th>
<th>Problem for</th>
<th>How to control for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant variables</td>
<td>Age, intelligence, experience, gender</td>
<td>Independent measures</td>
<td>Randomly assign participant to condition</td>
</tr>
<tr>
<td>Situational variables: 1. Order effects 2. Demand characteristics 3. Investigator effects 4. Attrition</td>
<td>1. Carrying out a task repeatedly changes behaviour, could be due to boredom 2. Aspects of the research situation which triggers a</td>
<td>1. Repeated measures 2. – 3. – 4. Repeated measures due to repeated conditions using same</td>
<td>1. Leave a long gap between conditions; use independent measures or matched pairs or counterbalancing: Where each condition is either tested 1st/2nd in equal amounts. This</td>
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a) Structured – set format of standardised questions
b) Semi-structured – Set questions but these can be varied and expanded on
c) Unstructured – No set format and questions allows the interviewer to follow the natural progression of a convocation

ii. Questionnaires – set of written questions
  ✓ Practical
  ✓ Limited affect to its validity and reliability so can be carried out by anyone
  ✓ Large amounts of info from a large sample (population validity) in a short period of time and in a relativity cost effective way
  ✓ Quantitative data can be used to create new theories or test existing hypotheses
  × No way to tell how truthful PP’s are = lacks reliability
  × Investigator effects – researcher could misinterpret/leave out data thought of as unimportant = lacks reliability
  × PP’s could misread/misunderstand question

   Types of questions:
   ❖ Forced question – making you chose an answer, even if an answer may not be your choice
   ❖ Closed question – options given
     ✓ Easier to analysis
     ✓ Less time consuming
     × May overlook options = lack population validity
   ❖ Open question – options aren’t given
     ✓ Wide range of answers = less general answers = more valid
     × Time consuming
     × Harder to analysis due to many options and variables
   ❖ Scale question – Answering on a scale
2. Content Validity - Asking experts in the field of topic if the study reflects the aims
3. Concurrent/Predictive Validity - Comparing the test with another test
4. Construct Validity - Assess theory using knowledge via textbooks, etc. and assess if the aims of the study are in line with the knowledge
   ▪ Improving:
     ➢ Correctly operationalise variables to create objective results
     ➢ If content analysis: do prior research before creating categories
     ➢ Have no external party assessing the study
     ➢ Piolet study – ask PP’s to look at assessment for wording or any other difficulties
     ➢ Control extraneous variables

- External Validity
  ▪ Definition: To what extent can you generalise the findings?
  ▪ 4 ways to assess external validity:
    1. Population Validity - Can you generalise the findings to the wider population?
    2. Ecological Validity - Can you generalise the findings to the real world?
    3. Historical Validity - Can you generalise the findings to different periods of time?
  ▪ How to improve external validity:
    ➢ Large sample improves population validity
    ➢ Representative sample increases population validity
    ➢ The usage of a more realistic setting, e.g. a field experiment improves ecological validity
    ➢ Removal of a bias improves ecological validity
    ➢ Replication of a study of different experimental designs to improve ecological validity

- Internal Vs External Validity
  ▪ The more control you have over the variables, the better the internal validity will be, but it becomes more artificial and so decreases the ecological (external) validity. And vice versa.
  ▪ It depends on the purpose of the study, which you want: high interval/external validity as both can’t be high.
- Purpose: Test details of the theory – Want to have high internal validity
- Purpose: Able to apply theory to the real world – Want to have high external validity

Peer Review

A01 –

- **What?** About validating new knowledge
- **Why?** Because reports are written by the phycologists and sent to the journals. They then decide whether to publish the report or not, and if so they are validating the knowledge. But the reports have to have specialists assess them which helps to decide whether the reports are sound or not.
- **How?** Need to get a panel of peer reviewers to assess the report. They are all specialists in the area that the report is written in.
- **What do they do?** Assess the report of methodological grounds, assess it on validity, reliability and ethical issues.
- **Who?** Volunteers, specialists and anonymous
- **What can they do?** Publish the paper immediately, propose changes to the study and then publish it or reject the paper.
- **Purpose?** To validating new knowledge, parliamentary office of science and technology suggest 3 purposes of peer review:
  1. Allocation of research funding
  2. Publication of research in scientific journals and books so that the knowledge can be shared with the scientific community
  3. To validate knowledge and so can assess the research rating of university departments.

A02 –

- **×** Lots of research is published online now days and this means that anyone can publish their work without having a peer review, so you don’t know if it is sound or not.
- **×** As it takes so long, due to the peer reviews being volunteers so will only do it in their spare time, a research can lose their scientific knowledge so there’s a danger in it not being published.
- **×** May not be possible to find an expert willing to assess the work, may end up finding someone who isn’t an expert they may not be able to make a valid judgement of the paper.