

**Advanced Higher Psychology (C071 13)**

Research Investigation Guidelines

*March 2004*

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# 1 Background Information and Overview

The Advanced Higher Psychology Course (C071 13) comprises **two** mandatory Units and **one** optional Unit from a choice of five, as follows:

## Mandatory Units

D406 13	Perspectives in Psychology
D407 13	Psychology: Research

## Optional Units — choose from:

D70F 13	Cognitive Psychology
D70G 13	Social Psychology
D70H 13	Biological Psychology
D70J 13	Developmental Psychology
D70K 13	The Psychology of Individual Differences

**Psychology: Research** is a mandatory one credit Unit at Advanced Higher level and as such there is a notional 40 hours of teaching and learning. The Unit forms one of three Units leading to the award of Advanced Higher Psychology. It may also be taught as a stand-alone Unit, therefore meeting the needs of candidates undertaking a Group Award at Advanced Higher level, or, for students seeking grounding in psychological research methods and enquiry.

The Unit is designed to develop depth of knowledge and understanding of psychology as an empirical science and as such encourages the development of planning, analysis and evaluation through the design, implementation and evaluation of an investigation in psychology. The Unit also covers the application of inferential statistics.

There are four Outcomes attached to this Unit:

1. Use inferential statistics in psychology
2. Plan and research an investigation in psychology
3. Implement an investigation in psychology
4. Evaluate an investigation in psychology

Candidates undertaking the Unit may choose from research methods of either a qualitative or quantitative nature, for example:

- ◆ Experimental method
- ◆ Survey method
- ◆ Observational method
- ◆ Correlational method

## 2 Unit Assessment Procedures

Unit D407 13 **Psychology: Research** is assessed internally using the NAB materials for this Unit. These are composed of planning grids and a logbook that should be completed in an on-going way by the candidate and assessed regularly by the teacher/lecturer. These grids and logbook provide evidence of authenticity of work, give the candidate and teacher/lecturer an opportunity to improve the quality of work and provide the candidate with a platform for writing their Research Investigation. The grids and logbook further provide evidence to satisfy internal assessment procedures and provide evidence for the Core Skills profile for the Unit.

The Internal Assessment may be completed in two ways:

- 1) Where a **quantitative** research method is used and therefore inferential statistics are generated, Outcomes 1, 2 and 3 may be integrated and assessed together by means of keeping a logbook and planning grid — detailing evidence of all three outcomes as the Research Investigation progresses. Outcome 4, being reflective in nature, requires the candidate to review the research process. Outcome 4 is assessed by the teacher/lecturer interviewing the candidate and completing a checklist of competence. Both logbook and planning grid should be assessed by the teacher/lecturer as the candidate progresses through the research process.
- 2) Where a **qualitative** research method is used, and therefore no inferential statistics are employed, Outcome 1 (inferential statistics) requires to be assessed individually by means of a NAB or the teacher/lecturer's own assessment materials covering related performance criteria. As above, a logbook and planning grid for Outcomes 2 and 3 should be kept, with Outcome 4 being assessed by means of a reflective interview between the candidate and teacher/lecturer.

See NAB materials for further guidelines on internal assessment requirements including exemplar logbook/checklists.

*It is recommended that the Research Investigation guidelines and NAB materials for the Psychology: Research Unit are used in combination to ensure all performance criteria are met for internal and external assessment for candidates pursuing the Advanced Higher Psychology course.*

### Core Skills

Successful completion of this Unit gives automatic certification in the Core Skill of Problem Solving at Higher Level.

# 3 Course Assessment Procedures

The Course assessment for Advanced Higher Psychology is made up of:

1. An externally set question paper worth **70 marks**
- and
2. A Research Investigation worth **35 marks**.

Candidates are required to produce a **Research Investigation** in standard psychological format of between 2,500-3,000 words, excluding footnotes, references and appendices. A maximum of 35 marks can be awarded for the Research Investigation. The investigation undertaken by the candidate should be based on a topic/concept within the chosen Advanced Higher optional Unit. Alternatively, candidates who have already completed the National Course in Higher Psychology (C071 12) may wish to investigate a topic/concept studied at this level. It is recommended that candidates do not tackle a topic/concept of which they have no previous knowledge.

The completed **Research Investigation** should be submitted to the SQA by **April 30** to be externally marked. Evidence of validity, critical appraisal of aims, research design, methodology, evidence and conclusions will be assessed in terms of psychological content and style.

The **Research Investigation** should normally be undertaken alongside Unit D407 13 in that any generated planning grids and logbook would help the candidate to produce the Research Investigation.

## Important guide to Assessment procedures

If Unit D407 13 Psychology: Research is taken *as part of the course* for Advanced Higher Psychology:

- ◆ the Unit is assessed **internally** by means of the NAB
- ◆ the Research Investigation is marked **externally**

Where Unit D407 13 is taken *on a stand-alone basis* and not as part of the Advanced Higher Psychology *course*:

- ◆ the Unit is assessed **internally** by means of the NAB
- ◆ a Research Investigation is **not required**

## 4 Ethical Considerations

Whilst candidates are free to choose a research project of their own design, or replicate a piece of established research, care should be taken over the ethical implications of either. Candidates and teachers/lecturers must follow the British Psychological Society (1993) Guidelines in conducting research at Advanced Higher and other levels and 'Ethical Principles for Conducting Research with Human Participants' (BPS 2000). Teachers/Lecturers ultimately carry responsibility to ensure that candidates are aware of, and abide by, these guidelines.

### A few points to bear in mind:

- ◆ Issues of consent, deception, debriefing, the right to withdrawal, confidentiality, privacy, protection of participants from psychological and/or physiological harm and monitoring of colleagues apply and should be evident in any write-up.
- ◆ Carrying out observational research in **public** view only, is acceptable. Consent must be obtained where applicable. Evidence to this effect should be contained in, for example, an appendix.
- ◆ Candidates at Advanced Higher level are not qualified to give psychological advice to participants in research projects.
- ◆ Candidates must consider their own personal safety. It is inappropriate to carry out any piece of research that may put the candidate at personal risk.

Copies of ethical guidelines can be obtained from:

The British Psychological Society (BPS)  
St. Andrews House  
48 Princess Road East  
Leicester  
LE1 7DR  
Tel: 0116-254 9568  
E-mail: [mail@bps.org.uk](mailto:mail@bps.org.uk)  
**Web address: [www.bps.org.uk](http://www.bps.org.uk)**

Or

The Association for the Teaching of Psychology (ATP)  
c/o BPS  
**[www.theatp.org](http://www.theatp.org)**

Or

Most Psychology texts provide good/practical summaries of ethical guidelines, eg Malim, T. and Birch, A. (1998) *Introductory Psychology*. Macmillan Press Ltd. Chapter 8.

# 5 Brief Overview of Steps in the Research Process

- ◆ Define the problem — select a topic for research.
- ◆ Review the literature — familiarisation with existing research on the topic.
- ◆ Formulate an aim, leading to hypotheses of what will be tested. What is the relationship between the variables?
- ◆ Select a research design — choose one, or more, research methods appropriate to the aims and hypotheses, eg non-experimental/correlation, experiment/observation.
- ◆ Carry out the research — collect data, record information.
- ◆ Interpret results — analyse results by means of appropriate statistical tests for quantitative data or through appropriate analysis of qualitative data.
- ◆ Write up the research process and findings in standard psychological format in 2,500-3,000 words.

# 6 Planning the Research Investigation

## Information for Teachers/Lecturers

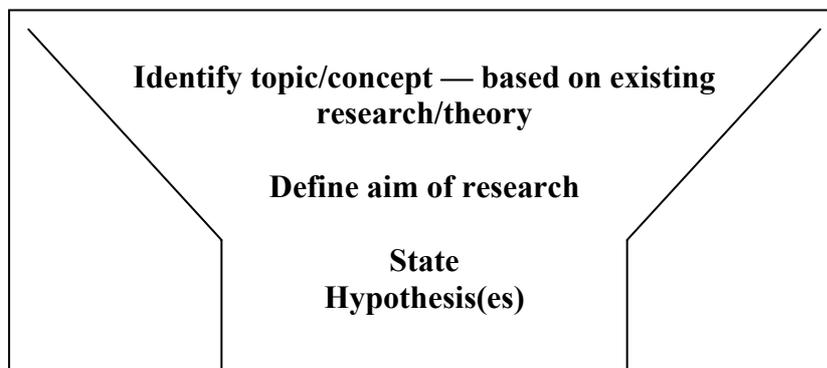
The basis of good research depends on paying attention to some fundamental factors. One way of achieving this is to take a ‘checklist approach’. This ensures that minimum requirements are met and important points have not been overlooked. A checklist can be found at the end of these guidelines for use by both Teachers/Lecturers in their teaching of this Unit, and for the candidate as a means of ensuring all requirements are met. Details of each stage therein are provided below.

## Planning

The key to good research is planning. Generally candidates are keen to ‘get going’ with their research and see time spent planning as unnecessary. It should be reinforced that inadequate planning usually leads to errors that may be difficult or impossible to amend at a later stage rendering the research poor in quality. This will reflect in the candidate’s mark and eventual course grade. It is therefore recommended that planning should take around 12-15 hours of this Unit.

## Issues to be considered in planning

*Identify and specify the research investigation by ‘funnelling’*



Firstly, a **topic/concept** will require to be identified. Candidates and teachers/lecturers should bear in mind that the topic should:

- ◆ Arise from the NQ framework for Psychology at Higher or Advanced Higher level.
- ◆ Be of interest to the candidate.
- ◆ Have easily identifiable background research available.
- ◆ Be based on existing research and/or theories.

Teachers/Lecturers may also wish to consider their own level of expertise in the area in order to give the candidate the appropriate level of support.

- ◆ A **specific aim** of the investigation should be identified. The aim should be clear in terms of what the investigation hopes to achieve and is very important to the research process. This becomes especially important in qualitative research where a hypothesis may not be appropriate.
- ◆ Emerging from the aim, if appropriate, both the null and experimental hypotheses should be identified. The one- or two-tailed direction of the hypotheses should also be identified as should the level of significance.

### **Selection of method**

Candidates may choose either a qualitative or quantitative method. It should be remembered that if a qualitative method is chosen candidates are additionally required to provide evidence by means of NAB materials that they are competent in inferential statistics.

The method chosen will to a large extent reflect the overall aim of the research. Teachers/Lecturers may provide the candidate with *guidance* as to the most appropriate method. The method should be planned in four sections.

- 1 **Design:** concerns the selection of an appropriate design, for example, experimental, correlational, non-experimental (eg survey or observation).
  - ◆ If using an experimental method, is a dependent or independent measures design most appropriate to the aims and hypotheses?
    - How will conditions be allocated? (eg randomly)
    - How do the conditions relate to the independent variable? (eg How many participants in each condition? How many trials did they perform?)
    - What controls will be necessary?
    - Will counterbalancing be necessary? Consider how this is to be achieved.
  - ◆ If a non-experimental design is chosen, details of how the research will be carried out should be considered and planned eg:
    - Is interviewing/observation the most appropriate method? Why? How is this to be done?
    - How will participants be allocated? Etc.
- 2 **Participants:** how will participants be selected (which sampling method is best suited to the research?) What, for example, ages/gender/educational background/socio-economic status are relevant? Will the participants be naive to the aim of the research?
- 3 **Materials/Apparatus:** what will be required? Are resources available?

- 4 **Procedure:** how will the research be carried out? The procedure should be planned and standardised as necessary.

Other issues to be considered include the feasibility of the investigation. Is there sufficient time for the design of the research? Is it practical given level of expertise? Are there any ethical considerations that may give cause for concern, eg issues of consent/debriefing? Are there any safety issues to be considered, etc?

### **Results**

Qualitative data will require to be dealt with in two ways, descriptively and inferentially.

The type of data collected will influence any statistical analysis conducted, eg independent/dependent, parametric/nonparametric tests. The planning of how data will be collected is therefore important in consideration of the selection of any appropriate statistical test. Final selection of a test will depend on the design used. Candidates should also identify an acceptable level of significance enabling them to accept or reject their null hypothesis as appropriate. Guidance on selection of appropriate tests is provided in NAB materials for this Unit and, for example, Hugh Coolican's 'Research Methods and Statistics in Psychology' published by Hodder and Stoughton Educational. Descriptive statistics should include histograms/bar charts or other graphical representations as appropriate.

Qualitative data may include descriptive graphical information if appropriate, eg from observational studies, however it is acceptable to use **only** introspective accounts. In this situation planning will also be required as to how introspective accounts will be recorded and analysed.

### **Discussion**

This section cannot be planned in detail, as it is largely reflective in nature. As the discussion should be written in a logical sequence it is useful to have the following elements in mind during the planning of any research:

- ◆ Discuss, explain and evaluate the results in the light of the hypothesis(es) if appropriate
- ◆ Discuss, explain and evaluate the results in the light of pertinent theory/theories as found in relevant background literature
- ◆ Discuss, explain and evaluate limitations of the study in terms of, for example, methods/procedures
- ◆ Suggest improvements and direction of future research

Any useful ideas concerning these issues should be noted down while planning and carrying out the research and used in the final write up.

The write up should also include a reference section using the Harvard Reference System and an Appendix. The Harvard Reference System is the protocol used by

psychology students worldwide. Details of this are available from any school/college/local authority librarian or as found in psychology text books. Candidates are advised and encouraged to keep proper note of all references used throughout the research process as this will save much time at the write up stage, back-tracking on references read weeks before. All relevant material for appendices should also be kept and used as appropriate, for example, 'permissions' letters and replies.

# 7 Implementing the Research Investigation

Time allocated for implementing research will vary. As a guide around 8-10 hours should be set aside for implementation.

Candidates may choose to work alone or in small groups in carrying out research. It is emphasised that the final write-up must be of an individual nature. If working in groups *all* candidates should be involved in *all* stages of the research. It is inappropriate for a candidate in a research group not to be involved at the planning stage, to have no involvement in the implementation stage and/or to have no involvement in working out the statistical tests or analysis of results. NAB guidelines should assist teachers/lecturers in tracking each candidate's contribution and involvement throughout the process of the investigation. Outcome 4 of NAB materials involve the candidate in a reflective interview with the teacher/lecturer.

# 8 Marking Guidelines for Teachers/Lecturers

A total of **35 marks** can be awarded for the Advanced Higher Research Investigation. This equates to one-third of the overall mark allocation of the Advanced Higher Psychology Course award. Marks are allocated on the following basis:

## **Title (1 mark)**

Title should reflect the nature of the research. Humorous or ‘quirky’ titles are unlikely to achieve full marks.

## **Abstract (2 marks)**

The abstract will be marked holistically. To achieve full marks the following must be included:

- ◆ The aim and/or hypotheses and background research upon which the investigation is based.
- ◆ The method and/or design used.
- ◆ A brief description of participants and how they were selected.
- ◆ A brief description of the research conducted.
- ◆ A summary of the results, including a statistical conclusion, where appropriate.
- ◆ A conclusion based on results/findings obtained.

## **Introduction (6 marks)**

1 mark will be allocated for each of the following as found:

- ◆ The general area of topic under investigation should be discussed.
- ◆ Relevant background study/studies should be discussed.
- ◆ A rationale for the research investigation should be given.
- ◆ Aims should be clearly stated.
- ◆ If appropriate both the experimental (alternate) and null hypothesis should be stated in standard form.
- ◆ The direction of hypothesis/level of significance should be stated if appropriate.

## **Method (4 marks)**

1 mark will be allocated for each of the following:

- ◆ Design.
- ◆ Participants.
- ◆ Apparatus/Materials.
- ◆ Procedure.

Candidates pursuing a non-experimental design should be particularly careful with their Procedure section above.

**Results (5 marks)**

This section will also be marked holistically. To achieve full marks the following should be included:

- ◆ A statement of how data was obtained/Reference to a raw data table (usually to an Appendix).
- ◆ Rationale behind appropriate descriptive and inferential statistical techniques stated.
- ◆ Labelled table(s) and summary of descriptive statistics. Labelled representations and explained graphical presentation of results.
- ◆ Statement of observed/critical values given / Level of significance stated.
- ◆ Statement of effect/relationship of results/findings in light of hypothesis given.

Where a qualitative method is used, and no inferential statistics presented, marks will be allocated for:

- ◆ A detailed statement of data gathering technique used.
- ◆ A description of results/findings.
- ◆ Inferences taken from these in light of aims.

**Discussion (6 marks)**

Marked holistically, for full marks the following should be included:

- ◆ Statement of results.
- ◆ Interpretation and discussion of results/findings in light of hypothesis.
- ◆ Interpretation and discussion of results/findings with reference to background studies.
- ◆ Methodological limitations of research undertaken.
- ◆ Improvements to future research.
- ◆ Direction of future research.

**Conclusion: (2 marks)**

Conclusion(s) reached described in appropriate format.

**References (2 marks)**

No marks will be awarded for a bibliography.

- ◆ Full and complete references to journals/books/web sites for all studies/theories should be provided.
- ◆ Harvard referencing system should be used.

**Appendix (2 marks)**

Should include raw data, calculations, appropriate materials, eg questionnaires, as referred to in the research investigation using italicised Roman numerals, ie.

Appendix *i, ii, iii*.

**Headroom (Up to 5 marks)**

Marks can be awarded on the judgement of the marker. All headroom indicators need *not* be included to achieve the full five marks. Headroom indicators may include amongst other things:

- ◆ Correct grammar/spelling throughout
- ◆ Correct use of psychological terminology
- ◆ Scientifically concise and appropriate to purpose
- ◆ Ethical considerations
- ◆ Quality of presentation (may be typed or hand-written)
- ◆ Detailed introduction/discussion
- ◆ Correct and appropriate use of 'further' statistical measures, eg appropriate usage of more than one inferential statistic
- ◆ Contents page and page numbering
- ◆ Well linked graphs and tables to text

\*\* Candidates/teachers/lecturers should note that half marks may awarded if appropriate.

## 9 Information for Candidates: Writing Research Reports

The final and most important stage of carrying out a research investigation is the writing of the report. It is suggested that this should be carried out as quickly as possible after completing the research in order to avoid the possibility of ‘forgetting’ important details and the whole process going cold.

There are two important reasons for writing a report. Firstly to communicate your research to others. Secondly, and with reference to good science, a detailed report allows others to replicate your work for validity and reliability purposes.

Writing a report involves a different writing style to that of writing essays. If you have not written one before it is essential you spend some time preparing for the write-up. Familiarise yourself with report writing by reading one or two reports from reputable journals — The ‘British Journal of Psychology’ for example. Furthermore you must, as an Advanced Higher student try to read as many classic studies as possible as part of your course reading. These are written in the style you yourself will use in your investigation and are often available on the internet from a reputable source. Your teacher/lecturer may be able to assist here by providing you with exemplars of previous candidates’ work.

Your report should be around 2,500-3,000 words in length excluding footnotes, references and appendices. Whilst you will not be penalised for a report that is a little short or a little overlong, you should try to keep to within a 10% approximation of the guidelines. Short reports indicate material and/or depth of knowledge for Advanced Higher level is lacking. Overlong reports suggest a non-factual writing style and/or inclusion of irrelevant material. Writing your report will take around 15 hours and must be your own work.

### Language

The first thing to take account of is the style of language used in report writing:

- ◆ As the report is written *after* the research has been carried out, it will be written in the past tense.
- ◆ It should be factual and business like. Do not include long descriptive passages, the purpose is to convey the message of your report, therefore do not include long descriptions of previous research/theories or irrelevant information.
- ◆ Do not write in the first person, keep language impersonal, eg ‘the participants were asked to...’ rather than ‘I asked the participants to...’.
- ◆ Do not include names of participants/schools/colleges or any other information, which may break confidentiality. Refer to participants as

‘participant A’ or ‘participant 1’ and so on. Simply refer to your school as a ‘secondary school’ or your college as a ‘college of further education’.

- ◆ The language used should not be highly technical in content, but should include the use of psychological terms/concepts where appropriate. In other words the language of the report should be indicative of a candidate studying at Advanced Higher level.

### **Structure of a report**

Whilst there is no absolute correct or incorrect way to structure a report, there is a generally agreed format of presentation. Details of each stage are provided below along with the mark allocation.

- ◆ Title
- ◆ Abstract
- ◆ Introduction
- ◆ Method (including: design, participants, materials/apparatus, procedure)
- ◆ Results (description and treatment of results)
- ◆ Discussion
- ◆ Conclusion
- ◆ References
- ◆ Appendices

### **Title (1 mark)**

The title should be brief, but indicate the nature of the research. For example: ‘A Survey Of Gender Related Attitudes Towards Children’s Play’. ‘The Gender Survey’ is not adequate.

### **Abstract (2 marks)**

The abstract is a brief summary of your research and is placed on page one of your report following a Contents page. As a summary it should be brief, around 150-200 words maximum and should include the following points.

- ◆ The aim and background research of your investigation (do not include a detailed description of the background research).
- ◆ The method and/or design used, eg if a dependent/independent measures design was used?
- ◆ A description of the participants and how they were selected, eg 40 participants of equal gender, aged between 20-25, were selected using opportunity sampling ...
- ◆ A description of the task/experiment, eg ‘participants in the experimental group were shown 20 stimulus cards...’
- ◆ A summary of the results, eg ‘the chi squared (9.12) was significant at the 0.05 level...’ Also include any graphical information in this section.

- ◆ A non-numerical conclusion of results and implications for the hypothesis(es).  
For example ‘the findings appear to support...’

The abstract should be written in sentences, ‘bullet points’ are inadequate.  
Overlong abstracts are unlikely to achieve full marks.

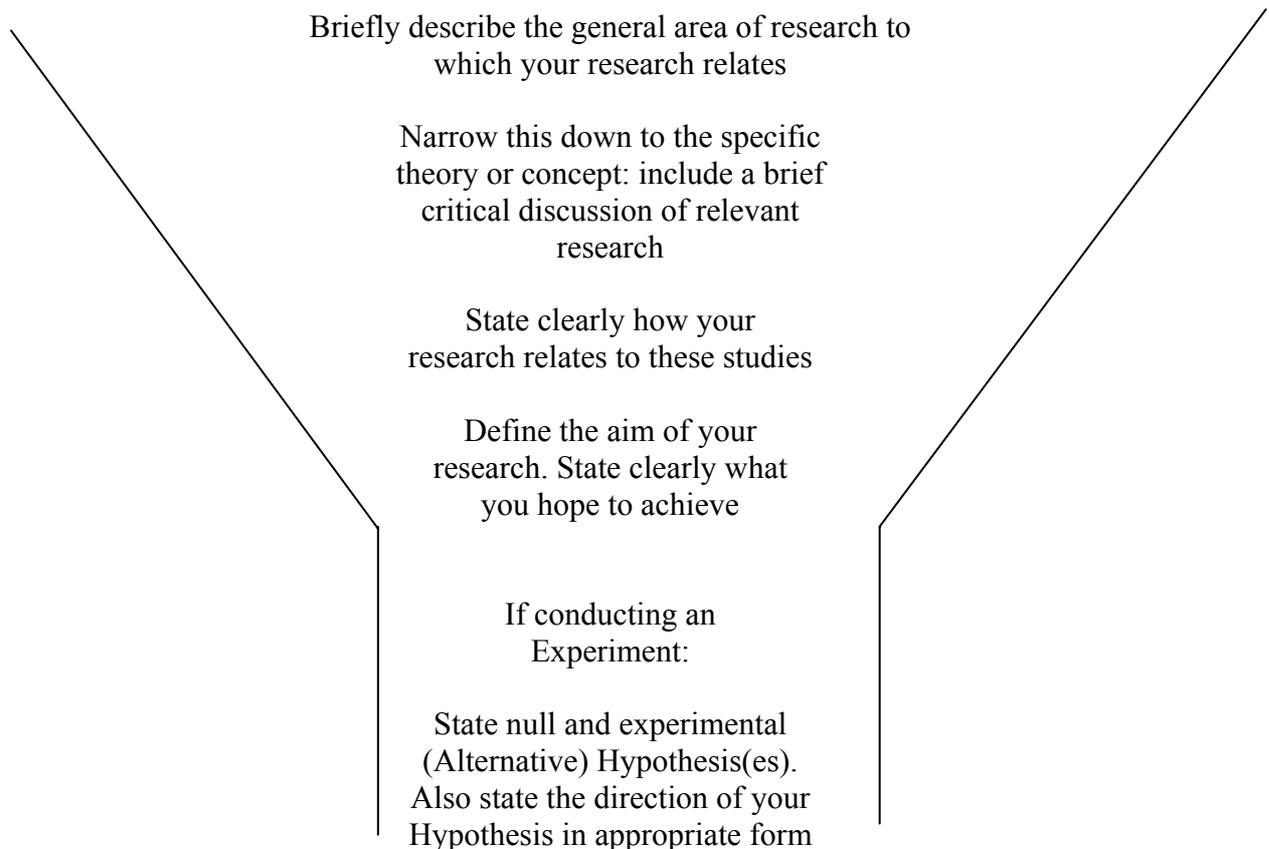
### **Introduction (6 marks)**

The purpose of an introduction is twofold:

- ◆ to set your research in the context of other relevant research and/or theory
- ◆ to provide a background to your aim and hypothesis(es).

Your introduction should be written in sentences, have a logical structure and be of around 750-1,000 words (maximum). The introduction is **not** an essay on your chosen topic.

When writing your introduction a useful technique to employ is that of ‘funnelling’.



## **Method (4 marks)**

A Methods section usually has four subsections and must be written in enough detail to allow a reader to replicate the investigation if so wished. The word count for the method section may vary depending on the method and design used. Approximately 500 words are expected.

**Design**— State the method and design used, eg Experimental: field or laboratory experiment; non-experimental: survey or structured/naturalistic observation etc. Keep the details of how the research was carried out for the procedures subsection.

If using the experimental method state the following:

- ◆ Dependent/independent measures design (Repeated/independent measures)
- ◆ Conditions of experiment (Control/experimental groups)
- ◆ Controls used.

**Participants** - state sampling method. Numbers/ages/gender split/any other relevant information regarding background of participants, eg socio economic status. Were participants informed or naïve to the aim of the research?

**Materials/Apparatus** - All materials and apparatus should be described. Where appropriate a (clean) copy of eg questionnaires should be filed in the Appendix. *Do not* include every copy of completed questionnaires in the appendix — one clean copy, as an exemplar is sufficient. Make reference to where this can be found in the appendix.

**Procedure** - should be described in enough detail to allow a reader to replicate your research procedure and come up with the same results/findings. Do not write this section as a set of instructions, but as a description of what was done. Remember to write in the past tense. You may wish to include the following:

- ◆ Standardised instructions given to participants
- ◆ Implementation of any controls referred to in the design subsection
- ◆ Exact requirements of participants (instructions given to participants)
- ◆ How performance was measured and recorded.

## **Results (5 marks)**

The presentation of quantitative data is in two subsections: descriptive data and then treatment of results. Word counts in this section will vary depending on the type of research carried out. Explanation of results derived from qualitative research should be around 500 words.

### ***Quantitative data***

**Descriptive data** — This is summarised data (not raw data— which should be in the appendix). Summarised data should be in the form of

tables/charts/histograms/or other graphical representations. All should be labelled clearly and have an accompanying written explanation. Unexplained graphs or graphs with essential detail missed out, eg  $x$  and  $y$ -axis values will *not* receive the full mark allocation for this section. A common error made by students is to include graphs in the appendices — graphs however are not raw data but summarised data and therefore should be in your results section.

***Treatment of results*** — State what test was used, eg Mann Whitney U, Chi squared etc. State your level of significance and whether the results were found to be significant at this level. State whether your null hypothesis was accepted or rejected. Include any calculations in the appendix — failure to do so may result in marks being withdrawn, as the workings cannot be checked for accuracy. Under Treatment of Results point the reader to the part of the appendix where these calculations can be found.

### ***Qualitative data***

Some qualitative research may include observational checklist results, if so, this should be summarised and described in the form of, eg tables, histograms, as above. If the data is all qualitative, the results should be summarised, described and conclusions drawn. For example, introspective accounts should be summarised, and in description, examples (quotes) may be used and the appropriate conclusions drawn. It may also be appropriate to include relevant quotes from transcribed interviews.

Whether your data is qualitative or quantitative — you should *not* discuss your results in this section.

### **Discussion (6 marks)**

The discussion again has four sub sections and should be between 750-1,000 words (maximum). The aim of the discussion is to:

- ◆ Discuss and expand upon the results section. State this in non-numerical terms, referring again to whether the null hypothesis was accepted or rejected.
- ◆ Discuss the findings of your research in terms of the background research. Make comment on whether the results were expected or not and if they are in agreement with previous research. If not suggest reasons why not.
- ◆ Identify the limitations of the study and suggest improvements, in other words evaluate your own research. You may wish to comment on your method/design/procedure/sampling method.
- ◆ Suggest the direction of future research in your area of research interest.

Keep your discussion relevant to your research; do not include any ‘new’ research, which has not been identified, alluded to or explained in the introduction.

### **Conclusions (2 marks)**

This is a brief statement of your findings. State whether they support or refute relevant theory or research. Reference should be made to the hypothesis(es). The conclusion may be included at the end of discussion section.

### **References (2 marks)**

References *are not* a reading list (this is called a bibliography). In this section you should identify the source of any studies/theories you have mentioned in your report. The Harvard Referencing System is the most commonly used referencing system in psychology. Alphabetically, identify the author(s), date of publication, title of article, journal name, volume and page number.

For example:

Bem, S (1974). *The measurement of psychological androgyny*. Journal of Consulting and Clinical Psychology, 42, 155-62.

If an article is used from a book of edited articles the referencing remains the same, however details of the book should also be given, eg:

Fantz, R.L (1961). *The origin of form perception*. Scientific American. Quoted in Malim, T and Birch, A. *Introductory Psychology* (1998) Macmillan Press, London.

No marks are allocated for a bibliography.

### **Appendix (2 marks)**

This final section should contain copies of materials if appropriate as referred to in your investigation, eg questionnaire, all raw data, calculations and any other items referred to in the report. Label each item in a separate appendix eg Appendix *i*, Appendix *ii*.

### **Headroom marks (5 marks)**

Up to a further five marks may be awarded for headroom. Headroom marks are awarded on the judgement of the marker. To gain your 'headroom' the marker will consider if your investigation shows evidence that includes:

- ◆ Correct grammar/spelling throughout
- ◆ Correct use of psychological terminology
- ◆ Scientifically concise and appropriate to purpose
- ◆ Ethical considerations
- ◆ Quality of presentation (may be typed or hand-written)
- ◆ Detailed introduction/discussion
- ◆ Correct and appropriate use of 'further' statistical measures, eg appropriate usage of more than one inferential statistic
- ◆ Contents page and page numbering

- ◆ Well linked graphs and tables to text

Do not place each page in a 'polypocket' as they take time to remove for marking purposes. Simply staple and put it in the cover your teacher/lecturer gives you.

# 10 Candidate Checklist for Advanced Higher Psychology Research Investigation

Have you included the following? Tick box when completed.

- An appropriate **Title**
- An **Abstract** of between 150-200 words that includes the following:
  - The aim and/or hypothesis and brief background research of investigation.*
  - The method and/or design used*
  - A brief description of the participants and how they were selected*
  - A brief description of the task/experiment*
  - A summary of results with any statistical conclusion if appropriate.*
  - A conclusion stating results/findings obtained*
- An **Introduction** of between 750-1,000 words that includes the following
  - A discussion of the general area of topic under investigation*
  - A discussion of relevant background study/studies*
  - A rationale for the research investigation*
  - Aims clearly stated*
  - Both experimental (alternate) and null hypothesis stated correctly, (if appropriate)*
  - Direction of hypothesis stated and level of significance (if appropriate).*
- A **Method** section that includes the following:
  - Design explained*
  - Participants' selection procedure and details stated*
  - Apparatus/Materials explained*
  - Procedure explained*

*\*\* Candidates pursuing a non-experimental design should be particularly careful with their Method section.*
- A **Results** section that includes the following:
  - For quantitative data:
  - Rationale regards choice of descriptive and inferential statistical techniques*
  - Summary and labelled table(s) of descriptive statistics*
  - Labelled and explained graphical presentation of results*
  - Statement of observed/critical values given*
  - Level of significance stated*
  - Statement in light of Hypothesis given*

For qualitative data:

- A detailed statement of data gathering technique(s) used*
- Description of results obtained*
- Inferences from obtained results in light of aims*

A **Discussion** section of between 750-1,000 words includes the following:

- Statement of results*
- Interpretation of results/findings in light of hypothesis(es)*
- Discussion of results/findings with reference to background studies*
- Methodological limitations of research discussed*
- Improvements to research discussed*
- Direction of future research discussed*

A **Conclusion** section stating:

- Conclusion(s) reached stating your results (in non-numerical form) and their implications for your hypothesis(es)*

A **References** section that includes the following:

- Full and complete references to journals/books/web sites for all studies/theories referred.*
- Harvard referencing system used.*

An **Appendix** section that includes the following if appropriate:

- Raw data, calculations, appropriate materials, eg questionnaires as referred to in the Research Investigation.*

**Headroom** indicators. All indicators need not be included — it is quality and relevance that is appropriate. Have you?:

- Used correct grammar/spelling throughout.*
- Used psychological terminology appropriately.*
- Presented your report in a scientifically concise manner.*
- Considered ethical implications.*
- Presented a good quality standard of investigation — typed or hand-written.*
- Provided a detailed introduction/discussion*
- Used 'further' statistical measures appropriately*
- Provided a contents page and page numbering*
- Linked graphs and tables to text appropriately*

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SCOTTISH  
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