KEYS & TIPS

WRITING YOUR MASTER'S THESIS

Methodology Hand-Out

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PREFACE

This document is a brief summary of numerous academic resources about psychology research methods

Therefore, all of this information is given for purposes of clarity but does not encompass all rules for how to conduct a research project. There are many ways to perform research, but not enough space in this document to discuss all of them. . The student-researcher should be the person who decides how to conduct the research, how to present the results, all depending on the topic that is being researched.

Given that your thesis or research paper is a requirement for graduation, you are to follow RUPP's requirements on how to carry out your research. We have presented American Psychological Association (APA) format in this document because it is largely used in the international academic community, and also discuss other formatting options to introduce other approaches that are used in academia. However, the RUPP requirements may be different than other styles of formatting, so those requirements are what you are to use in carrying out your research.

This hand-out also aims to provide useful and precise information for specific questions that the student-researcher may come across the research process.. Therefore, all of the information presented may not be relevant to the reader, but they are encouraged to concentrate on the chapters that are pertinent to his or her research project.

The cited books in this document can be found in the formal consultation room of the university for further reference (Tanja and Dinyn's office).

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Phnom Penh, April 2010

PART 1

CONDUCTING THE RESEARCH

I. THE RESEARCH

A. up with ideas for a research project

Choosing an issue to investigate is always a problem for under and postgraduates. As a first step any of the following can be useful sources of interesting research issues. *(McQueen and Knussen, 2006, p. 19)*

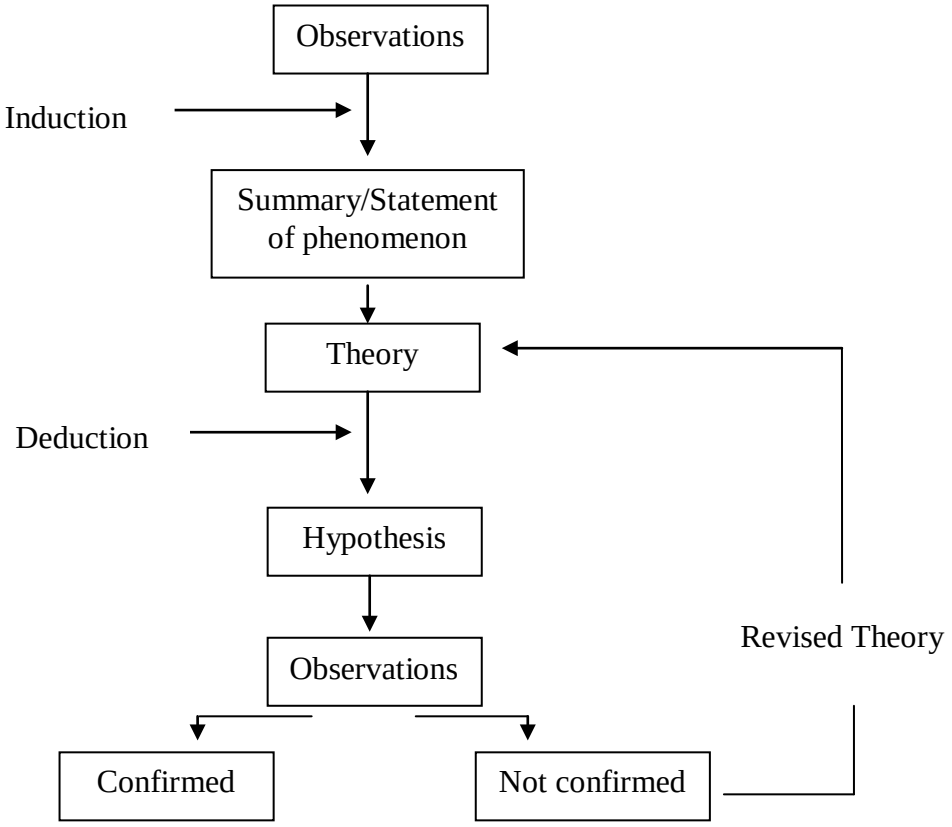
- Reading newspapers and watching news reports can identify a range of problems, aspirations and issues which are of current social concern.
- Pursuing an area of personal academic interest will usually lead to an issue which can form the basis of a study.
- Recognizing staff interests will often point to interesting areas of possible research, in addition to identifying an ideal supervisor for a particular topic.
- Access to a particular group or organization can sometimes be the starting point in identifying a research issue, either in terms of what the organization does (for instance, working with a health-centered group might raise a number of health-related issues to explore) or in terms of structural, organizational issues (such as how leadership is exercised within the group, or motivation maintained or stress dealt with among the individual members).

- Reading current journal articles will be a guide to the issues other researchers are interested in, in addition to providing up-to-date references on related material. The bulletin of the British Psychological Society (BPS), The Psychologist, for example, is a good guide to not only current interests but also forthcoming attractions, offering a useful insight to future research trends.

B. of the research

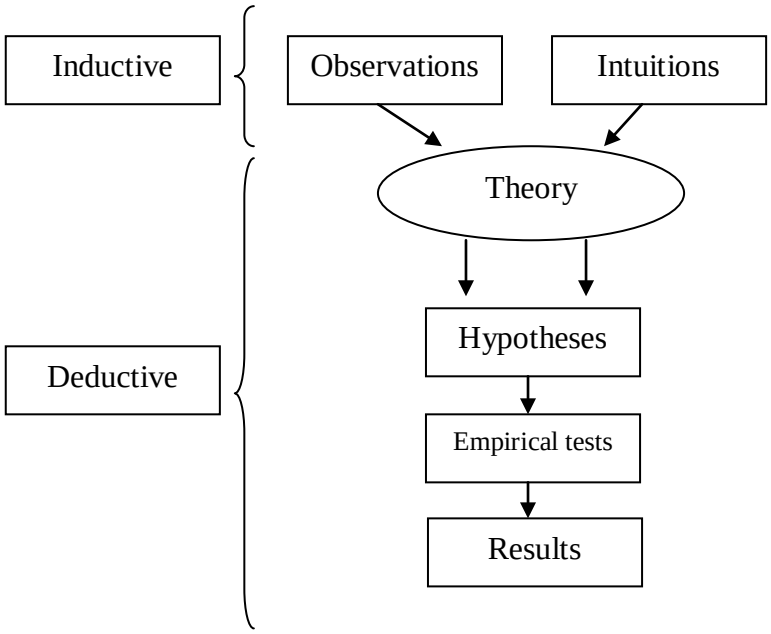
1. idealized model of science

(Foster and Parker, 1995, p. 4)



2. hypothetico-deductive approach

(Langdridge, 2004, p. 12)



3. / independent variable measure

(Foster and Parker, 1995)

Experimental group

Pre-test → independent variable → Measure dependent variable

[counseling sessions] *[e.g. level of depression]*

Control group

Pre-test → Measure dependent variable

C. a research project

(McQueen and Knussen, 2006, p. 27)

- Selection of a field in which to carry out your study
- Carrying out a literature review on the topic
- Statement of a research question (what you are trying to do)
- Providing a rationale *[concrete focus]* for the research question

- Refining your rationale into a number of specific and testable hypotheses
- Designing and planning an appropriate way of testing your hypotheses
- Implementing your plan and gathering data (carrying out the study)
- Analysing your data and presenting the results of the study
- Discussing your data, re-appraising the research question in light of your findings and considering the entire rationale, conduct and theoretical basis for your study

D. when planning a study

(Foster and Parker, 1995, pp. 132-133)

1) Decide on the general area.
2) Read background material.
3) Decide on the specific area.
4) Check on feasibility: do you have the resources, time, participants? If not, go back to step 3.
5) Consider ethical issues
6) Find and read relevant literature.
7) Specify the aim of this particular study.
8) Decide on the method(s): experiment, survey, observation, etc. Will you use more than one method?
9) Decide on the technique, the kind of *[what to]* measure (dependent variable) you will use.
10) Specify the independent variable and the number of levels you will have.
11) State the hypothesis. Check you are not trying to test a null hypothesis.
12) Design the experiment, quantitative non-experiment or qualitative method investigation.
13) Decide on how you will analyse the outcome. If you are using a quantitative method, draw up the tables in which you will show the data and specify which statistical tests will be needed.
14) Select the respondents. Allocate them to the various conditions using an appropriate procedure such as random group formation (see Box 3.4, p. 30) or a matching procedure (see Box 3.5, p. 33).
15) Create any materials you require and ensure you have any equipment you need such as computers, stopwatches, etc. Write out the instructions for the respondents. If there are two or more investigators, they need instructions too.
16) Run a pilot study on two or three people to check that everything proceeds as planned. If it does not, revise the procedure and run another pilot study.

17) Carry out the main study. Be prepared to stop, revise and run it again if it soon becomes clear that there is a problem such as people failing to follow the instructions or it proves impossible to record the data as the study is happening.
18) Collect the data and fill in the tables you created at step 13.
19) Analyse the data and interpret the outcome. (See Chapters Il and 12.)
20) Write the report. (See Charter 14.)
21) Submit the report. Achieved, or read carefully through the comments you get to see where you could have done better…

II. AND QUANTITATIVE RESEARCH

A. quantification-qualitative methods continuum

(Howitt and Cramer, 2005, pp. 252-253)

The conventional rigid dichotomy of quantitative-qualitative methodologies is inadequate to differentiate different types of research. It implies that research inevitably falls into one or the other of these apparently neat boxes. This is not necessarily the case.

Conceptually, research may be differentiated into two major stages:
- data collection
- data analysis

At the data collection stage, there is a range of possibilities, the degree of quantification (assigning of numbers or scores) and qualification (collecting data in terms of rich detail) may vary:

- *Pure quantitative* The data are collected using highly structured materials (such as multiple-choice questionnaires or physiological indexes such as blood pressure levels) in relatively highly structured settings (such as the psychological laboratory).

- *Pure qualitative* The data are collected to be as full and complete a picture as the researcher can possibly make it. This is done, for example, by video or tape recording extensive amounts of conversation (say between a counselor and client). There may be no structuring to the data gathered than that, though sometimes the researcher might choose to interview participants in an open-ended manner. Many qualitative researchers try to use as much naturalistic material as possible.

- *Mixed data collection* Between these extremes of quantification and qualitative data gathering are many intermediary possibilities. Some researchers choose to collect data in a quantitative form where there are good means of quantifying variables and

concepts but use open-ended and less structured material where the concepts and variables cannot be measured satisfactorily for some reason. Sometimes the researcher will use a mixture of multiple-choice type questions with open-ended questions which may help paint a fuller picture of the data.

However, we ought also to consider the data analysis stage of research in terms of the qualitative-quantitative distinction. The same options are available to us:

- *Pure quantification* If data have been collected solely in quantitative form, then there is little option but to analyze the data quantitatively. However, data may have been collected in qualitative form but the researcher wishes to quantify a number of variables or create scores based on the qualitative data. The commonest method of doing this is through a process known as coding (see Chapter 14). In this the researcher develops a categorization (coding) scheme either based on pre-existing theoretical and conceptual considerations, or develops a categorization system based on examining the data. This can involve the researcher rating the material on certain characteristics.

- *Pure qualitative* This option is generally only available if the data have been collected in qualitative form (quantitative data are rarely suitable for qualitative analysis, for obvious reasons). Quite what the qualitative analysis should be depends to a degree of the purpose of the research. As conversation (interviews or otherwise) are a common source of qualitative data, then discourse analysis and/or conversation analysis may be helpful. But this is a complex issue, which may best be left until qualitative methods have been studied in a little more depth.

- *Mixed data analysis* This may follow from mixed data collection but equally may be the result of applying qualitative and quantitative methods to qualitative data. This is quite a common approach though it is often fairly informally applied. That is, the researcher often has a primarily quantitative approach which is extended, illustrated or explicated using simple qualitative methods. For example, the researcher may give illustrative quotations from the open-ended material that is collected in addition to the more quantitative main body of the data. Such approaches are unlikely to satisfy the more demanding qualitative researcher.

B. is qualitative research?

(Howitt and Cramer, 2005, pp. 248-249)

So is qualitative research that which is concerned with the nature or characteristics of things? One obvious problem with this is that does not all research, qualitative or quantitative, seek to understand the nature and characteristics of its subject matter? Perhaps this indicates that the

dichotomy between qualitative and quantitative research is more apparent than real. If the distinction is of value then it should be apparent in the relationship between qualitative and quantitative research. (…):

- Qualitative methods are a preliminary stage in the research process which contributes to the eventual development of adequate quantification.

  The model for this is: Qualitative analysis → Quantitative analysis

- Qualitative methods provide a more complete understanding of the subject matter of the research. (…) Quantification encourages premature abstraction from the subject matter of research and a concentration on numbers and statistics rather than concepts. Because quantification ignores a great deal of the richness of the data, the research instruments often appear to be cru de and, possibly, alienating.

- More humanistic view of qualitative data is that human experience and interaction are far to complex to be reduced to a few variables as is typical in quantitative research.

Some of the more familiar data collection methods for qualitative analysis include:

- Observation: relatively unstructured observation and participation would be typical examples. Observation that involves just a few restricted ratings would probably not be appropriate
- Biographies (or narratives) which are accounts of people's lives or aspects of the lives
- Focus groups
- In-depth interviews
- Recordings of conversations
- Mass media output
- Documentary and historical records

C. versus qualitative

(Langdridge, 2004, pp. 14-15)

Quantitative

Advantages	Disadvantages
- Precise (in terms of measurement) - Controlled (in terms of design) - Makes claims about causation - Has predictive power (can generalize to other settings on the basis of some	- May grossly oversimplify the complexity of human nature - Fails to recognize the subjective nature - Does not recognize the individuality and autonomous nature of human beings

finding in a particular setting) - Is the dominant approach in psychology	- *[prone to errors by misunderstanding or interpretation or outer influence on the outcome]*

Qualitative

Advantages	Disadvantages
- Recognises the subjective experience of participants - May produce unexpected insights about human nature through an open-ended approach to research - Enables an 'insider' perspective on different social worlds - Does not impose a particular way of 'seeing' on the participants	- Cannot apply traditional notions of validity and reliability (see Charter 3) on the data - It is often not appropriate or even possible to make generalizations or predictions - Needs justification for it is still not a widely and consistently accepted approach to psychological research

D. of quantitative and qualitative approaches to research

(Glesne, 2006, p. 5)

Quantitative Approach	Qualitative Approach
Assumptions - Social facts have an objective reality - Variables can be identified and relationships measured	*Assumptions* - Reality is socially constructed - Variables are complex, interwoven, and difficult to measure
Research Purposes - Generalizability - Causal explanations - Prediction	*Research Purposes* - Contextualization - Understanding - Interpretation
Research Approach - Begins with hypotheses and theory - Uses formal instruments - Experimental - Deductive - Component analysis - Seeks the norm - Reduces data to numerical indices - Uses abstract language in write-up	*Research Approach* - May result in hypotheses and theory - Researcher as instrument - Naturalistic - Inductive - Searches for patterns - Seeks pluralism, complexity - Makes minor use of numerical indices - Descriptive write-up
Researcher Role	*Researcher Role*

- Detachment - Objective portrayal	- Personal involvement - Empathic understanding

III. TO FIND REFERENCES

The location of the references depends on the subject and type of research

It can be:

- Written (printed or handwritten text, scientific articles, excerpts from books, newspaper articles, letters...)
- Visual (physical traces left by man: monuments, sculptures, photography, printmaking, illustration, television...)
- Sound (oral tradition and also any documents stored using a technique such as the hard of hearing, recording, radio, etc…)

While searching for references, the student researcher will need to make sure that the reference is relevant to the research topic, and verify that the document is a valid and reliable resource for data

Reliable references are often thoroughly peer reviewed by a group of specialists or editors who decide whether or not the work is suitable for publication. Academic books, scientific journal articles, and others have a peer review committee and can be cited in a master's thesis without major risk to reliability.

The impact factor

(Howitt and Cramer, 2005, p. 94)

The impact factor is a measure of the frequency with which the average article in a journal has been cited within a particular period. This may be regard as a useful indicator of the quality of the journal. More prestigious journals should be more frequently cited than less prestigious ones.

The impact factor of a journal in 2004 is the ratio of the number of times in 2004 that articles published in that journal in 2002-3 were cited in that and other journals to the number of articles published in that journal in 2002-3:

Impact factor of a journal 2004 = (citations in 2004 of articles published in journal in 2002-2003) / (number of articles published by

journal in 2002-3)

Magazines, popular books, and certain websites are other sources for information, but may be more risky because these sources are often not reviwed or evaluated in terms of validity or reliability.

It is the responsibility of the student-researcher to find reliable references and check if the sources are valid and trustworthy.

According to Allard (1978), Canadian professor who tried to “systematize scientific approach” in the humanities, the first goal to approach a new subject when a student starts his research is not "to strip the documentation, but to locate it" so that it can then become" readily accessible".

Here the student-researcher will seek out various resources that can be found in libraries, the internet, and through professional and academic relationships.

Also, when beginning to search for a research topic,, Allard (1978) suggested using the "chain technique": "We first consult synthetic books about the topic, these articles referring to case studies, articles from journals, inventories, documents printed or handwritten documents. We can continue this chain almost indefinitely. We may, in this way, quickly relieve the documentation on a particular topic".

Also it is important to look for primary sources directly in a scientific journal.

The bibliography can be accessed in locations such as libraries in universities, hospitals, specialized centers, cultural centers... (books and unpublished documents such as theses, dissertations, conference proceedings…) but sometime this method of searching can take time and the student may not have access to a library with large numbers of books.

Here are some information about the searching for books:

1. classification systems

(Howitt and Cramer, 2005)

There are two main systems for classifying and arranging non-fiction (mostly) books and journal in a library.

a. Dewey Decimal Classification (DDC)

The Dewey Decimal Classification (DDC) system developed by Melvil Dewey in 1876 which is reputedly the world's most widely used library classification system

Each publication is given three whole numbers followed by several decimal places.

The first of the three whole numbers indicates the classes of which there are 10 as shown in Table 5.2. So psychology mainly comes under 1 _ _ although certain areas fall into other classes. For example, abnormal or clinical psychology is classified under 6 - -

The second whole number shows the divisions. Much of psychology comes under 1 5 –

The third whole number refers to the section. The decimal numbers indicate further subdivisions of the sections.

b. Library of Congress classification system

The other main system for organizing non-fiction material in a library is the Library of Congress classification system which was developed by that library in the United States.

Each publication is assigned one or two letters, signifying a category, followed by a whole number between 1 and 9999.

There are twenty-one main categories labeled A to Z but excluding 1,0, W, X and Y. These categories are shown in Table 5.3. Psychology largely comes under BF. Some of the numbers and categories under BF are presented in Table 5.4.

2. Internet as a way to search scientific information.

The databases which gather several scientific journals usually ask a code to have access of the articles. Without code they often provide only the abstract of the research article.

a. Database

- Primary source and scientific DB
  - Web of Knowledge (www.isiwebofknowledge.com)
  - Science Direct (www.sciencedirect.com)
  - Medscape (www.medscape.com)
  - PubMed/Medline (www.pubmed.gov)

Tips to help the search:

- Find good keywords
- Need to use advanced search with Boolean keywords: AND / OR / WITH NOT
- Find progressively in Keywords < Title < Abstract < Full text
- Save articles and read after

Without code, some ways to look for reliable data on internet exists:

b. search engine

- Google books (http://books.google.com)

You can find here a large selection of academic books, some in very limited access (snippet view), others with some pages available (limited preview), and some in full access (full view). The two last categories are useful to make a literature review.

To search documents, the "advanced book search" engine is often more efficient.

The problem with Google Book is that you can not copy the text. You can create an account and save your books inside or use the key "Print Screen" (may have several abbreviations as Prnt Scrn or Prt Scn) on your keyboard which will copy the screen and the book you are reading. After you can copy this page (ctrl+V) in a Word document.

Use the " " to find the exact sentence: "I'm as smart as most people"

- Google scholar (http://scholar.google.com)

Provide articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites… Some are in free access, others request a code.

Sometimes PDF on the right, sometime just abstract
Possible to save on the computer
Sometimes possible to copy the text of PDF, sometimes not

+ advanced search

c. website home page

Here are some important and serious institutions which publish online publication and reliable datas

- UN Institution website
  - WHO (http://www.who.int)

- UNICEF (http://www.unicef.org)
- UNESCO *(*www.unesco.org)
- APA (www.apa.org)

- Universities website / Hospital websites / Professional association websites

d. the authors

(Howitt and Cramer, 2005)

You may write to or e-mail the author (or one of the authors if there is more than one) of the paper and ask them to send you a copy.

It should be quicker to e-mail the author than to mail them.

Authors may have an electronic copy of the paper which they can send to you as an attachment to their reply.

IV. MATTERS

A. Regulations for Master's Degree Programs of the RUPP

The following judgments and statements constitute guidelines to be followed by candidates in an attempt to ensure that harm to researchers and their research subjects and all others involved is minimized and preferably removed. The research supervisor will check to ensure that these guidelines are being followed throughout the candidates research.

A. The Context of Ethical Judgments

The social and political context in which ethical judgments are made by social researchers is important. Due regard should be given to the following:

1. The social world is plural, contradictory and conflictual. It is hard to establish that there exists a singular, non-contradictory "public good'.
2. Relations of power are involved in all social pursuits.
3. Researchers should recognize that research is not neutral and should make explicit their epistemological postulates and assumptions.
4. Researchers study social problems and topics rather then people per se:
   people should not be treated as objects in the process of doing research.
5. Research has effects at the wider social level, as well as on individuals. These should be addressed.

6. Plagiarism *[see this topic in the "Plagiarism" chapter in the "Writing the report" part*] also constitutes unethical behavior

B. Ethical Guidelines

1. Researchers' responsibilities and obligations to colleagues, and hence to the discipline, are based both on the vital benefits of peer review of research and scholarship and on the desirability of maintaining accessibility to research.
2. Researchers should report results honestly, avoid actions that will violate or diminish the rights of research participants or clients and avoid raising false hopes.
3. Researchers have a responsibility to raise ethical issues with all research team members before, and while undertaking, research.
4. Researchers should protect the welfare and privacy of people or organizations participating in the research. People, groups and collectivities do not have an absolute right to privacy in their public capacity.
5. Researchers should protect privacy where appropriate by adequately disguising personal identities in written and oral reports of the research and by discussing only data relevant to the purpose of the research.
6. Where an assurance of confidentiality has been promised researchers should not reveal information received in the course of the research.
7. Researchers should inform research participants and funding agencies of any limits of confidentiality and anonymity.
8. Researchers should respect the rights of funding agencies, host institutions and publishers to be given adequate information about the research and to have their contribution acknowledged.
9. Researchers have a responsibility to maintain high standards of competence and to maintain knowledge of current information and methods in the areas they are researching.
10. Researchers should make full and honest disclosure, in both written reports and to researched participants, of financial and other forms of support of their research.
11. Researchers should give an account of their research methods and report the limitations of their research design.
12. Researchers should ensure that information of interest to individuals, groups and organizations be made available in a timely, acceptable and accessible manner.
13. Any claims or conclusions presented by the researchers ought to be supported by the evidence.

C. Research Participants

1. Wherever appropriate, informed consent should be sought from those individuals directly involved in the research to be undertaken. Thus researchers should:

a. Inform participants about the purpose and nature of the research and its possible implications for them;
b. make it clear that all have the freedom of choice to participate or not. This includes students;
c. make it clear to research participants from whom formal consent has been obtained that they may withdraw that consent at any time.

2. Researchers should attempt to anticipate and avoid possible harm to participants. However, where harm occurs, researchers have an obligation to take all possible steps to minimize such harm, and to account for their actions.
3. Research participants are entitled to receive appropriate feedback on the outcome of research; researchers should make provision for this.

D. Contractual Research

Before the research starts, the researcher should clarify with the client:

1. The right of the researcher to use the research results commercially or otherwise, or to publish research and information independently from the client.
2. The nature of the responsibility and liability of the researcher regarding the use made of the research results by the client once the research is completed.
3. When working for a multiplicity of clients which can be or are in competitive positions, the right to use information and results across projects should be carefully defined beforehand.
4. When research results are published independently by the researcher, the institutional context within which the research took place should be made clear. This includes the objective of the client organization, the nature and, extent of funding and the role of the client in framing and defining the research.

E. Teaching and Student Research

1. Ethical consequences outlined in this document apply equally to student research and ethics should be included in the training of all researchers.
2. Supervisors have a responsibility for the ethics of any research required of students.
3. Supervisors have a responsibility to discuss with each graduate student the ethics of that student's research.
4. Students retain ethical responsibility for their own actions. Students should take account of the advice on ethics provided by their teachers and supervisors.
5. Supervisors and teachers have a responsibility to ensure that the community is not misused as a student resource. They must take care not to exploit groups through repetitive and burdensome demands.
6. When student research is funded by outside agencies, supervisors have a responsibility to ensure that a suitable research contract is agreed upon which provides appropriate

remuneration, explicit agreements as to ownership and the use of data produced, and protection against unethical pressures.

F. **Authorship**

1. Researchers must acknowledge all persons who contributed significantly to the research and publication process.
2. Material taken from published or unpublished work must be identified and referenced to its author(s).
3. The copyrights of all research papers belong to their authors.

B. the participants

The researcher has duty of respect, information and confidentiality with his participants: it is a key point of the research.

1. duty of respect

It is mainly a reflection of :

a. of choice

Every participating in psychological research is voluntary, and has the choice to participate, to refuse or withdraw at any time of the study which has been proposed. When there is a minor, a parental consent of the child is essential. In some cases it may be useful to use a consent form that summarizes the purpose of research, instead of participating, ethics...

b. ethical acceptability

It refers to the levels of risk or discomfort with certain topics that may be perceived as intrusive. When certain topics, such as sexual behavior, for example, must be addressed, it is imperative to provide the participant prior information on the necessary information required on the part of the search, leaving the opportunity for participants to decide they want to or not participate in the study.

2. duty to inform

It refers to what will be communicated to the participant before entering the study and what it will broadcast the results of the study when it is completed.

a.

The information is clear and unambiguous: it avoids the concealment or partial information, explaining what is the contribution of the participant.

b. the end of the study

Before starting data collection, and based on research objectives, it is necessary to consider when and how will be the transmission of results to participants.

3. duty of confidentiality

It requires the researcher to maintain confidential information from the participant.

a. the thesis

In a thesis, the reader should not be able to recognize the identity of a participant. For this, the researcher should not appoint a member by his real name but use another name:

- pseudonym (Tra become Hoa); The researcher must then mention explicitly in its statement that the names of participants have been changed.
- initial (Nguyen Cao Minh become N.C.M.) ;
- patient 1, patient 2…

Even if it is often useful to provide specific information to situate precisely the reality of the patient (eventually the school name, the name of the hospital, the residential area, occupation of parents...), the researcher must pay attention to what might help identify the patient indirectly.

b. to others

As in any other clinical practice, the researcher does not convey to others information that identifies a participant. It must take measure to ensure that documents are not directly accessible.

C. the researcher

The researcher must use an appropriate research methodology. Inadequate procedures, such as using bias sampling, invalid instruments, wrong methods of data processing, etc... deeply distort research findings.

1. with individuals in a less powerful subordinate position to the researcher

(Howitt and Cramer, 2005, pp. 104-105)

Psychologists are often in a position of power relative to others. A university professor psychology has power over his or her students. Clients of psychologists are dependent on the psychologists for help or treatment. Junior members of research staff are dependent on senior research staff and subordinate to them.

It follows that some potential research participant may suffer adverse consequences as a result of refusing to take part in research or may be under undue pressure to participate simply because of this power differential. Any psychologist in such a position of power has an ethical duty to protect these vulnerable individuals from such adverse consequences. Sometimes, participation in research is a requirement of particular university courses or inducements may be given to participate in the form of additional credit.

In these circumstances, the ethical recommendation is that fair alternative choices should be made available for individuals who do not wish to participate in research.

2. to participate

(Howitt and Cramer, 2005, p. 105)

Financial and other encouragement to participate in research are subject to the following requirements:

- Psychologists should not offer unreasonably large monetary or other inducements (e.g. gifts) to potential participants in research. In some circumstances such rewards can become coercive. (…) While acceptable levels of inducements are not stipulated in the ethics, one reasonable approach might be to limit payments where offered to out-of-pocket expenses (such as travel) and a modest hourly rate for time. Of course, even this provision is probably out of the question for student researchers.
- Sometimes professional services are offered as a way of encouraging participation in research. These might be, for ex ample, counseling or psychological ad vice of same sort. In these circumstances, it is essential to clarify the precise nature of the services, including possible risks, further obligations and the limitations to the provision of such services. A further requirement, not mentioned in the APA ethics, might be that the researcher should be competent to deliver these services. Once again, it is difficult to imagine the circumstances in which students could be offering such inducements.

D. IRB recommendations

Five basic principles guide the decisions of IRBs when reviewing applicants proposals:

1. Research subjects must have sufficient information to make informed decisions about participating in a study.
2. Research subjects must be able to withdraw, without penalty, from a study at any point
3. All unnecessary risks to a research subject must be eliminated.
4. Benefits to the subject or society, preferably both, must outweigh all potential risks.
5. Experiments should be conducted only by qualified investigators.

E. American Psychological Association (APA) ethics

(Howitt and Cramer, 2005, p. 100)

The APA ethics are based on five general principles.

- *Principle A: Beneficence and nonmaleficence*

Psychologists seek to benefit and avoid harm to those whom they engage with professionally. This includes the animals used in research. Psychologists should bath be aware of and guard against those factors which may result in harm to others. The list of factors is long and includes financial, social and institutional considerations.

- *Principle B: Fidelity and responsibility*

Psychologists are in relationships of trust in their professional activities. They are thus required to take responsibility for their actions, adhere to professional standards of conduct, and make clear exactly their role and obligations in ail aspects of their profession al activities. In relation to research and practice, psychologists are not merely concerned with their own persona) activities but with the ethical conduct of their colleagues (widely defined). It is worthwhile quoting word for word one aspect of the professional fidelity ethic: 'Psychologists strive to contribute a portion of their professional rime for little or no compensation or persona advantage.'

- *Principle C: Integrity – accuracy, honesty, truthfulness*

Psychologists are expected to manifest integrity in all aspects of their professional work. One possible exception to this is circumstances in which the ratio of benefits to harm of using deception is large. Nevertheless, it remains the duty of psychologists even in these circumstance to seriously assess the possible harmful consequences of the deception

including; the ensuing distrust. The psychologist has a duty to correct these harmful consequences. The problem of deception is discussed in more detail later.

- *Principle D: Justice – equality of access to the benefits of psychology*

This means that psychologists exercise careful judgment and take care to enable all people to experience just and fair psychological practices. Psychologists should be aware of the nature of their biases (potential and actual). They should not engage in, or condone, unjust practices and need to be aware of the ways in which injustice may manifest itself.

- *Principle E: Respect for people' s rights and dignity*

According to the American Psychological Association, individuals have the rights of privacy, confidentiality and self-determination. Consequently, psychologists need to be aware of the vulnerabilities of some individuals that make it difficult for them to make autonomous decisions. Children are an obvious example. The principle also requires psychologists to be aware of and respect differences between cultures, individuals and roles. Age, culture disability, ethnicity, gender, gender identity, language, national origin, race, religion, sexual orientation and socio-economic status are among the se differences. Psychologists should avoid and remove biases related to these differences while being vigilant for, and critical of, those who fail to meet this standard.

F. AAA ethics

(Glesne, 2006, p. 131)

The AAA Code of Ethics bas evolved through several versions, most recently amended and adopted by the AAA membership in 1998. The following portion is taken from their five-page statement and focuses upon researchers' responsibilities to people and animals with whom the y work and whose lives and cultures they study.

1. Anthropological researchers have primary ethical obligations to the people. Species. And materials they study and to the people with whom they work. These obligations can supersede the goal of seeking new knowledge, and can lead to decisions not 10 undertake or to discontinue a research project when the primary obligation conflicts with other responsibilities, such as those owed to sponsors or clients. . . .

2. Anthropological researchers must do everything in their power to en sure that their research does not harm the safety, dignity, or privacy of the people with whom the y work, conduct research, or perform other profession al activities . . .

3. Anthropological researchers must determine in advance whether their hosts/providers of information wish to remain anonymous or receive recognition, and make every

effort to comply with those wishes. Researchers must present to their research participants the possible impacts of the choices, and make clear that despite their best efforts, anonymity may be compromised or recognition fail to materialize.

4. Anthropological researchers should obtain in advance the informed consent of persons being studied, providing information, owning or contro!1ing access to material being studied, or otherwise identified as having interests which might be impacted by the research. It is understood that the degree and breadth of informed consent required will depend on the nature of the project and may be affected by requirements of other codes, laws, and ethics of the country or community in which the research is pursued. Further, it is understood that the informed consent process is dynamic and continuous; the process should be initiated in the project design and continue through implementation by way of dialogue and negotiation with those studied… Informed consent, for the purpose of this code, does not necessarily imply or require a particular written or signed form. It is the quality of the consent, not the format, that is relevant.

5. Anthropological researchers who have developed close and enduring relationships . . . with either individual persons providing information or with hosts must adhere to the obligations of openness and informed consent, while carefully and respectfully negotiating the limits of the relationship.

6. While anthropologists may gain personally from their work, they must not exploit individuals, groups, animals, or cultural or biological materials. They should recognize their debt to the societies in which they work and their obligation to reciprocate with people studied in appropriate ways. (American Anthropological Association 1998, 2-3)

G. Ethics checklist

(Foster and Parker, 1995, pp. 15-16-17)

Before gathering any data, you should go through this set of questions. If any of the answers raise ethical issues, we have suggested the steps you should take.

1 Are the participants likely to suffer any threats to their wellbeing, health, values or dignity?
If the answer is ‘yes’, you need to consider altering the procedure.
If the answer is ‘no’, go to question 2(a).

2 (a) Are the participants from a different cultural or social background, or of different age or sex from the investigators?
If the answer is ‘yes ‘, go to question 2(b).

If the answer is ‘no’, go to question 3.

2 (b) Have members of these groups been asked whether the procedure is likely to threaten participants’ wellbeing?

If the answer is ‘yes’, go to question 3.

If the answer is ‘no’, you should ask members of the participants’ group about possible threats; only if no objections are raised should you proceed.

3 Have potential participants been informed of the aim of the study?

If the answer is ‘yes “ go to question 4.

If the answer is ‘no’, you should add to your procedure a stage where participants are told about the aim of the investigation. If you be1ieve this would undermine the study, you should seek approval from your ethics committee before starting the study.

4 Are any of the participants unable to give informed consent for themselves? (For example, they may be too young, unable to understand, or mentally ill.)

If the answer is ‘no’, go to question 5.

If the answer is ‘yes’, you must write out the steps you have taken to obtain agreement from any participants unable to give informed consent for themselves. These should be considered by your ethics committee before starting the study.

5 Does the study involve withholding information about the experiences the participants will have?

If the answer is ‘no’, go to question 6.

If the answer is ‘yes’, you should add to your procedure a stage where participants are told about the procedure of the investigation. If you believe this would undermine the study, you should seek approval from your ethics committee before starting the study.

6 (a) Does the study involve giving misleading information about the experiences the participants will have?

If the answer is ‘no’, go to question 7.

If the answer is ‘yes’, go to question 6(b).

6 (b) Has the approval of independent advisors been obtained?

If the answer is ‘yes’, go to question 7.

If the answer is ‘no’, you must obtain approval from independent advisors before starting the study.

7 Are the de briefing arrangements full and properly timed?

If the answer is ‘yes’, go to question 8.

If the answer is ‘no’, you should add at an appropriate point in your procedure a de briefing stage where participants are told about the aim, design and procedure of the investigation, and where they can contact one of the research team later should that be

necessary. If you believe this would undermine the study, you should seek approval from your ethics committee before starting the study.

8 Have participants been informed of their right to withdraw from the study at any time: including after the data have been collected?

If the answer is 'yes', go to question 9.

If the answer is 'no', you must ensure this information is given to all participants before any data are collected.

9 Have anonymity and confidentiality arrangements been made?

If the answer is 'yes', go to question 10.

If the answer is 'no', you must warn participants before any data are collected that the results will not be confidential.

10 Have participants been asked about medical conditions or any other features mat might create a risk for them when they undergo the study?

If the answer is 'yes', go to question 11.

If the answer is 'no', you must add to your procedure, before any data are collected, a stage where participants are asked about such conditions. Any participants who report medical conditions or other features that increase the risk to them when they undergo the experience should be invited to withdraw and should not be used.

11 Does the procedure include assuring participants that personal questions need not be answered?

If the answer is 'yes', go to question 12.

If the answer is 'no', you must revise the procedure so that the briefing of participants includes such an assurance.

12 Does the study involve any invasion of privacy?

If the answer is 'yes', you should revise the procedure so there is no invasion of privacy. If you believe this would undermine the study, you should seek guidance and approval from your ethics committee before starting the study.

V. APPROVAL

Much research takes place in organizations such as the police, prisons, schools and health services. Many, if not all, of these require formal approval before the research may be carried out in that organization or by members of that organization.

VI. CONSENT TO RESEARCH

(Howitt and Cramer, 2005) pp 102-103

The general principle of informed consent applies widely and would include assessment, counseling and therapy as well as research people have the right to have prior knowledge of just what they are agreeing to before agreeing to it. Only in this way is it possible for them to decide not to participate. Potential participants in research need to have the nature of the research explained to them in terms which they could reasonably be expected to understand. So the explanation given to a child maybe different from that given to a university student. According to the ethical principles, sometimes research may be conducted without informed consent if it is allowed by the ethical code or where the law and other regulations specifically permit. (Although one might question whether research is ethical merely because the law permits it.)

The main provisions which need to be in place to justify the claim of informed consent are:

- The purpose, procedures and approximate duration of the research should be provided to potential participants.

- Participants should be made aware that they are both free to refuse to take part in the research and also free to withdraw from the research at any stage. Usually researchers accept that this freedom to withdrawal involves the freedom to withdraw any data provided up to the point of withdrawal. For example, the shredding of questionnaires and the destruction of recordings are appropriate ways of doing this if the withdrawing participant wishes. Or they may simply be given to the participant to dispose of as they wish.

- The participant should be made aware of the possible outcomes or consequences of refusing to take part in the research or withdrawing. Frequently, there are no consequences but this is not always the case.

- The participants should be informed of those aspects of the research which might influence their decision to participate. These include discomforts, risks and adverse outcomes.

- Similarly, the participant should be informed of the benefits that may emerge from the research. A wide view of this would include benefits for academic research, benefits for the community, and even benefits for the individual participant. In this way, the potential participant is provided with a fuller picture of what the research might achieve which otherwise might not be obvious to them.

- They should be told of any limits to the confidentiality of information provided during the research. Normally, researchers ensure the anonymity of the data that they collect and also the identity of the source of the data.

- Participants should be informed of the nature of any incentives being made to participate. Some participants may agree to take part as an act of kindness or because they believe that the research is important. If they are unaware of a cash payment, they may feel that their good intentions for taking part in the research are compromised when the payment is eventually offered.

- Participants should be given contact details of someone whom they may approach for further details about the research and the rights of participants in the research. This information allows potential participants to ask more detailed questions and to obtain clarification. Furthermore, it has the benefit of helping to establish the bona fides of the research. For example, if the contact is a professor at a university, then this would help establish the reputability of the research.

When a psychologist conducts intervention research there may be issues of informed consent. This does not refer to every experiment but those in which there may be significant advantages to receiving the treatment and significant disadvantages in not receiving the treatment.

- The experimental nature of the treatments should be explained at the outset of the research.

- It should be made clear that the services or treatments which will not be avail able should the participant be allocated to the control condition.

- The method of assignment to the experimental or the control conditions should be explained clearly. If the method of selection for the experimental and control conditions is random then this needs to be explained.

- The nature of the services or treatments available to those who choose not to take part in the research should be explained.

- Financial aspects of participation should be clarified. For example the participant may be paid for participation, but it is conceivable that they may be expected to contribute to the cost of their treatment.

(Glesne, 2006, p. 132)

Though informed consent neither precludes the abuse of research findings, nor creates a symmetrical relationship between researcher and researched, it can contribute to the empowering of research participants. The appropriateness of informed consent, particularly

written consent forms, however, is a debated issue mat accompanies discussions of codes of ethics by qualitative inquirers. Through informed consent, potential study participants are made aware (1) that participation is voluntary, (2) of any aspects of the research that might affect th6r well-being, and (3) that they may freely choose to stop participation at any point in the study (Diener and Crandall 1978).

Originally developed for biomedical research, informed consent is now applicable when participants may be exposed to physical or emotional risk. Sometimes the requirement of written consent is readily accepted, as in the case of obtaining parental consent before studying young children. On other cases, as recognized by IRBs, the very record left by consent papers could put some individuals' safety at risk if discussing sensitive topics (i.e., crime, sexual behavior, drug use). If written consent were required for all research projects, then the work of same qualitative researcher would be curtailed. Written consent would also eliminate all unobtrusive field observations and informal conversations.

A. Lay Summary

(Glesne, 2006, p. 40)

Pre-data-collection tasks are not complete without a developed lay summary. Lay summaries are written or verbal presentations of your research that you give to research participants to help explain who you are, what you are doing, and what role you would like them to play in your research. In general, lay summaries address the following points:

1. Who you are
2. What you are doing and why
3. What you will do with the results
4. How the study site and participants were selected
5. Any possible benefits as well as risks to the participant
6. If applicable, the promise of confidentiality and anonymity to participants and site
7. How often you would like to observe or hope to meet for interviews
8. How long you expect each session to last
9. Requests to record observations and words (by notes, tape recording, or videotaping)

B. consent for recordings and photography

(Howitt and Cramer, 2005, p. 104)

Taking voice recordings, videos or photographs of participants is subject to the usual principle of informed consent. However, exceptions are stipulated in the ethical code:

- Informed consent is not necessary if the recording or photography takes place in a public place and is naturalistic (that is, there is no experimental intervention). This is ethical only to the extent that there is no risk of the inadvertent participants being identified personally or harmed by the recording or photography .

- The research requires deception (and that deception is ethical) then consent for using the recording may be obtained retrospectively during the de briefing session in which the participant is given information about the research and an opportunity to ask questions.

C. in which informed consent may not be necessary

(Howitt and Cramer, 2005, p. 104)

Circumstances in which it may be permissible to carry out research without prior consent of this sort. The overriding requirement is that the research could not be expected to (i.e. can be regarded as not likely to) cause distress or harm to participants. Additionally, at least one of the following should apply to the research in question:

- The study uses anonymous questionnaires or observations in a natural setting or archival materials – even then such participants should not be placed at risk of harm of any sort (even to their reputation) and confidentiality should be maintained.

- The study concerns jobs or related organizational matters in circumstances where the participant is under no risk concerning employment issues and the requirements of confidentiality are met.

- The study concerns 'normal educational practices, curricula or classroom management methods' in a context of an educational establishment.

D. sample consent form

(McQueen and Knussen, 2006, p. 121)

Thank you for agreeing to take part in this study.

My name is (name) and I am *(status; department; university or college).*

This study is investigating *(nature and aims of study).*

It will involve *(nature of participant's experience; the time demands of the study; sensitive issues).*

Please note that your participation in this study is entirely anonymous and voluntary, and that you may withdraw at any point. All the information gathered during the course of this study will remain confidential and will be seen only by *(state who will have access).*

If you have any concerns about this study or would like more information, please contact *(contact person and contact number).*

If you having read and understood ail of the above, you agree to participate in this study, please place a tick in the box below.

☐

Optional:
If you have any concerns about issues raised during this study, please contact any of the information lines below: *(contact details)*

VII.

(McQueen and Knussen, 2006, p. 355)

- If you have not already done so, decide on your potential interviewees and start the process of obtaining names and addresses. You also need to draw up information sheets and consent forms for your potential interviewees.
- Draw up an interview schedule, and start preparing and piloting. Get training if possible. Practice your interview technique.
- Consider the ethical issues and make decisions about ways to deal with potential problems.
- Decide how you are going to record interviews, talking the ethical and philosophical issues into account.
- Consider the issues for and against self-disclosure and co me to a decision.

- Consider the best way to conduct your interviews, but be flexible.

A. structures

(Langdridge, 2004, pp. 50-51-52)

Unstructured interviewing

Advantages	Disadvantages
- Flexible - Rich data - Relaxes interviewee - Should produce valid (meaningful) data	- Unsystematic - Difficult to analyse data - Strongly influenced by interpersonal variables - Not reliable

Semi-structured interviewing

Advantages	Disadvantages
- Can compare responses and analyse data more easily - Analyse data more easily - Reduction of interpersonal bias - Respondents not constrained by fixed answers	- Same loss of flexibility for interviewer - Question wording may reduce richness - Less natural - Coding responses still subject to bias - Limits to generalization

Structured interviewing

Advantages	Disadvantages
- Easy to administer - Easily replicated - Generalisable results (if the sampIe is adequate) - Simple data analysis - Reduced bias - Lower influence for interpersonal variables - High reliability	- Respondent constrained - Reduced richness - Information may be distorted through poor question wording - Suffers tram difficulties associated with questionnaires

B. needed for successful interviewing

(Langdridge, 2004)

The best interviews are those where you develop a relationship with the interviewee such that they feel comfortable, relaxed and able to tell you about even the most intimate aspects of their lives.

Use of appropriate language

For instance, if you use very formal language and technical terms your participants may feel even more anxious and uncomfortable. It is often advisable to try to use the language that your interviewee would normally use [but do not fall into the trap of trying to speak in a way that is not natural for you as well – you will only look stupid and lose any credibility you may have had).

Neutrality

This means that you do not judge an interviewee or look shocked (not even a raised eyebrow) – no matter what! This is easier said than done, and worth practicing in role-play.

Confidentiality

This should help generate feeling of safety for your interviewee.

C. skills for successful interviewing

(Langdridge, 2004, pp. 53-54)

Give your respondent permission to speak

One of the first things many experienced interviewers do is share information (with the interviewee) at the start of the interview about the purpose and importance of the research and why the information they will receive from the interviewee is of value. However, it is also worth telling the interviewee about the process of the interview as well. That is, that you will not be saying much (because you are interested in hearing what four respondent bas to say) and that you want them to tell you as much as they can, even if they do not think it is important or of value. On other words you encourage them to elaborate stories from the outset by giving them permission to speak.

Learn when not to talk

It is important to leave gaps so that an interviewee is able to find space to think, compose their response and talk. This is easier said than done and another technique worth practicing in role-play. One more thing – try not to make too much noise when encouraging your participant to keep talking; a nod of the head will generally have the same effect without producing incessant grunts (that you have to transcribe later - see Chapter 14) on your tape recording.

Be comfortable with silence

When people first start interviewing (and for that matter counseling) they often find it difficult to step outside the normal conversational rules that are vital for effective communication in everyday life. One of those unwritten rules for many people is to fill silent pauses (have you ever wondered why we have so many conversations about the weather?). However, when you are interviewing you need to allow silence (as long as the interviewee is comfortable with it) so that people have sufficient time to think about their responses (remember you are familiar with your interview schedule but four respondents are not).

Do not trivialize responses

Another important lesson from counseling here. It is important that all responses are treated with respect. If you look like you could not care less (or shocked and disgusted) this will be picked up by your interviewee. You must listen to everything that is said and treat everything said with appropriate respect. This is important for both ethical and practical reasons.

Do not dominate

Some people can appear a little forceful in conversation. It is important that you recognize these aspects of four personality and try to lessen their effect in an interview. So, when l interview I think about slowing down and talking more Softly so that l do not dominate the interview and inhibit the interviewee. Of course, if you are very quiet and softly spoken you may have to learn to speak up. And one mare thing – try not to let the setting (including the tape recorder) intimidate your participants. Many people feel intimidated by universities (especially laboratory rooms in a university) and surprising numbers of people are anxious when there is a tape recorder present. So, try to interview people in a setting where they feel comfortable and keep the tape recorder out of the way so people forget about it.

Look interested!

There are a number of ways of looking interested even if you are not! Firstly, appropriate listening and responding demonstrate interest. Secondly, the use of appropriate non-verbal communication (leaning forward and nodding) also helps. However, there is no substitute for genuine interest, so always try to interview people about things you care about.

D. good interview schedule

(Langdridge, 2004, p. 54)

Unstructured interviews generally require a list of questions or topics but not really a schedule that you follow in the interview. Conversely, you cannot conduct a structured interview without a formal list of questions and responses to communicate to your participants (after looking more like a complicated questionnaire than an interview schedule).

Avoid jargon

Use language your respondent (and you) will feel comfortable with. Try to avoid jargon or technical terms that are not widely used and understood.

Try to use open rather than closed questions

Open-ended questions enable the respondent to open up about their thoughts and feelings.

- Bad: Should the president resign?
- Good: What do you think the president should do now?

Minimal encouragers/probes

These are single words or short phrases that encourage or reinforce the interviewee. They are very helpful in demonstrating that you are listening and encouraging your participant to keep talking.

Examples include: 'I see', 'Go on', 'Yes', 'Hmm', 'Can you tell me more?', 'What happened next?'

Probes can also be used to encourage the elicitation of specific types of information.

For example effect: 'How did that make you feel?'
Or to focus on awareness: 'What do you think about that?'

Funnelling

Start by eliciting the respondent's general views and then move on to more specific concerns.

VIII. AND ADAPTATION OF CLINICAL INSTRUMENTS (TESTS, SCALES…)

You should always be cautious and critical of using scales or tests that have mostly been developed in Western countries and are not yet adapted to the Asian cultural context, as the

Western scales or test may a misleading outcome. For example, if a Cambodian client that you are interviewing seems depressed, it might not show up in the Western depression scale because people might express symptoms of depression very differently in Cambodia. It might be very interesting to apply these tests and tools to Cambodian clients in order to find out more about similarities and differences between Western and Asian clients. Converseley, it would be helpful to record your obsevations of depression in Cambodian clients, and create an adapted depression scale for use in Cambodia. The cultural understanding and background of native Cambodian students can be very helpful in adapting these tests for use in Cambodia.

So for a thesis there are several options for using Western tests or scales :

1) If it is a test or scale that seems to fit the Cambodian context as well, it would be appropriate to use it and compare the results to the native students impression and understanding of Cambodian culture. If strong differences exist that indicate that the test or scale ought to be adapted, then the researcher could make recommendations for the adaptation from based on their thesis that could be later tried in pilot testing and then validated.

2) If it is a test or scale that uses examples that are not easily understood by Cambodians or questions on topics that do not concern the average Cambodian (but *is* relevant to average Western clients), you can use the relevant parts of those tests that seem applicable, and make suggestions to replace the irrelevant parts. You can then use this self developed scale in a pilot testing, and based on the results you can validate the measure when you have more available time and resources.

3) If you want to investigate specific Cambodian issues for which there are no relevant scales, then you can consider putting together a completely new test or scale and perform a pilot study.

With all these possibilities, it is necessary to describe in detail how your scale/test/measure . was created, which parts are original and which have been adapted,, your reasons for adapting the scale/test/measure, and your reflections on the process.The whole process has to be clearly explained and made transparent, so that the process could be replicated. In addition, you should attach the original measure/test/scale and the adapted version in your appendices and include your outcome of both in the research results section of your thesis.

There are several steps to follow if you are planning on using or adapting a scale in Khmer. First, translate the document. Next, discuss your translation with fellow students or other Khmer psychologists. Then have the adapted scale (without showing them the original scale) backtranslated by another Khmer speaker who is fluent in English as well The result of the back translation should then be compared to the original and validated by a possibly native English speaking psychologist. All of these procedures should be mentioned in the thesis and the backtranslation and translation should also be put into the annexe.

For more information see: O. Behling and K.S. Law. (2000). Translating questionnaires and other research instruments. Thousand Oaks, CA: Sage Publications.

IX. ITEMS FOR QUESTIONNAIRES

It is important to remember that a questionnaire should be viewed as a multi-stage process beginning with definition of the aspects to be examined and ending with interpretation of the results. Every step needs to be designed carefully because the final results are only as good as the weakest link in the questionnaire process. Although questionnaires may be cheap to administer compared to other data collection methods, they are every bit as expensive in terms of design time and interpretation.

Prior to designing a questionnaire it is important to develop a clear research objective (discussed below) as well as to identify a representative sample of a target population that the questionnaire will be studying.

When to use a questionnaire?

There is no all encompassing rule for when to use a questionnaire. The choice will be made based on a variety of factors including the type of information to be gathered and the available resources for the experiment. A questionnaire should be considered in the following circumstances.

- **When resources and money are limited.** Questionnaires can be issued to many people at once in a short amount of time and the cost may only consist of photocopies and postage.
- **When it is necessary to protect the privacy of the participants.** Questionnaires are easy to administer confidentially. Examples of such cases would include studies that need to ask embarrassing questions about private or personal behavior.
- **When corroborating other findings.** In studies that have resources to pursue other data collection strategies, questionnaires can be a useful confirmation tools.

Methods of Questionnaires

A variety of methods for issuing questionnaires are available depending on the scope of the research. The style of questionnaire differs with regard to potential for respondent bias, length, time, cost, ease of data analysis, sample size, and myriad other factors.

- Face to face interview
- Phone interview
- Self-administered questionnaire
- Internet questionnaire

Objective of Questionnaire

- The importance of well-defined objectives can not be over emphasized. A questionnaire that is written without a clear goal and purpose is inevitably going to overlook important issues and waste participants' time by asking useless questions. The questionnaire may lack a logical flow and thereby cause the participant to lose interest. Consequential, what useful data you may have collected could be further compromised, and the analysis stage may become difficult.

Writing the Questionnaire

Most questionnaires gather demographic data to be used in correlating responses between different groups of people. These questions are usually at the beginning in order to ease the respondent into the questionnaire process. It is important to only ask background questions that are necessary, avoid overtly personal questions.

Asking the income of a respondent may or not be appropriate depending on the topic of the questionnaire

Types of questions

Open format questions are those that ask for unprompted opinions, do not involve a predetermined set of responses, and the participant is free to answer however he or she chooses.

- Advantages: Good for soliciting subjective data, use with a loose range of responses, wide variety of responses, true reflection of opinion
- Disadvantage: Require significantly more time and resources to analyze, open to reader interpretation, require more energy and time from respondent.

Closed format questions offer multiple choices for response, gives the respondent a predetermined range of responses, and are more objective in his or her response.

- Advantages: Much easier to analyze data, requires less time and energy from respondent, and easier to standardize.
- Disadvantage: More difficult to construct/write, offer a limited range of responses for often complicated topics, and produce data with less color and depth.

Questionnaire Virtues

Clarity**:** This is probably the area that causes the greatest source of mistakes in questionnaires. Questions must be clear, succinct, and unambiguous. The goal is to eliminate the chance that the question will mean different things to different people. If the designers fails to do this, then essentially participants will be answering different questions.

Leading Questions**:** A leading question is one that forces or implies a certain type of answer. It is easy to make this mistake not in the question, but in the choice of answers. A closed format question must supply answers that not only cover the whole range of responses, but that are also equally distributed throughout the range. All answers should be equally likely.

Phrasing**:** Most adjectives, verbs, and nouns in English have either a positive or negative connotation. Two words may have equivalent meaning, yet one may be a compliment and the other an insult. For example, the words "child-like" and "childish may seem similar in meaning but actually have different connotations. Also, avoid biased, emotive words.

Embarrassing Questions**:** Embarrassing questions dealing with personal or private matters should be avoided. Your data is only as good as the trust and care that your respondents give you.

Hypothetical Questions: Hypothetical often forces the respondent to give thought to something he or she may have never considered. This does not produce clear and consistent data representing real opinion.

Prestige Bias: Prestige bias is the tendency for respondents to answer in a way that make them feel better. There is little that can be done to prevent prestige bias, the best means to deal with prestige bias is to make the questionnaire as private as possible.

Other Guidelines

- Avoid using complicated language that is difficult to understand, and avoid complicated questions (that ask two questions, that ask for secondhand information, etc.)
- Be mindful of difficulties in memory recall: recalling past behavior can be inaccurate so attempt to present averages or estimates in frequency of behavior (i.e. "How many hours in the past week have you spent watching TV?")
- Order the questionnaire in such a way that creates an easy flow, easier questions are first, and have potentially objectionable or difficult questions near the end
- Increase your response rate through increasing perceived rewards (i.e. make the questionnaire

interesting), decrease perceived cost (do not inconvenience the respondent), and establish trust (i.e. provide a token of appreciation)

(Howitt and Cramer, 2005, p. 207)

Writing questions or items for a psychological measure requires one to focus on one key matter - trying to concoct items that are as unambiguous and clear as possible. The other main criterion has to be that they seem to measure a range of aspects of the topic. (…)

Once again the important lesson is to research and explore the topic in a variety of ways. Only in this way can you acquire the depth of knowledge to create a good measure.

Nevertheless, here are some few tips:

- Use short and simple sentence structures.
- Short everyday words are better than long ones.
- Avoid complex or problematic grammar, such as the use of double negatives. For example, 'You ain't seen nothing yet.'
- Leading questions which suggest the expected answer should be avoided largely because of the limiting effect this will have on the variability of the answers. For example, 'Most people think it essential to vote in elections. Do you agree?'.
- Choose appropriate language for the likely participants – what would be appropriate to ask a group of high court judges may be inappropriate to a group of nursery children.
- Tap as many resources for items and questions as feasible.
- Accept that you cannot rely on yourself alone as a satisfactory source of questions and ideas for questions.
- People similar to the likely participants in your research are a good starting point for ideas.
- Relax – expertise in question and item writing is a rare commodity. Most researchers mix trial and error with rigorous item analysis as a substitute.

Foster and Parker (1995, pp. 100-101) present also some few rules for writing questionnaire items

(1) Avoid jargon or technical terms unlikely to be familiar to your respondents.
(2) Avoid ambiguous questions and answers.
(3) Avoid 'combination' questions: do not include the word 'and' in case a respondent wants to respond 'yes' to one and 'no' to the other part of the question.
(4) Avoid negatives. Double negatives in the question or in the question and answer combination are especially likely to confuse your respondents.
(5) Do not use leading questions which imply the response that is wanted.

(6) Include a 'no opinion' option when asking about people's beliefs or attitudes.
(7) Avoid loaded questions containing emotive words which may bias the responses.
(8) The way people are asked to show their response should be simple. Ask them to tick what does apply, rather than delete what does not. Ticking or circling is more definite than underlining. You can ask people to put a cross (X) against the alternative which applies, but this may cause problems if people think of X as indicating 'wrong': a tick is less confusing.
(9) If you are asking about a number of different topics, questions one topic should be grouped together and as a rule they should go from the general to particular. Question referring to demographic information such as the person's age, sex, and income bracket can be placed at the end.

X. JEFFERSON TRANSCRIPTION FOR TRANSCRIBING INTERVIEWS

(Howitt and Cramer, 2005, p. 271)

One popular system for transcribing speech is the system developed by Gail Jefferson.

CAPITALS	Indicate that the word(s) is louder than the surrounding words.
	Indicates emphasis such as on a particular syllable.
Aster*isk	The speaker's voice becomes squeaky.
Numbers in brackets (1.2)	Placed in text to indicate the length of a pause between words.
A dot (.) in brackets	This is a micropause – a notice able but very short pause in the speech.
[ ]	Square brackets are used when two (or more) speakers are talking together. The speakers are given different lines and the brackets should be in line where the speech overlaps.
//	Another way of indicating the star! Of the second overlapping speaker's utterance,
; or:	Used to separate the speaker's name from their utterances.
?;	Indicates that the speaker is not recognizable to the analyst of the transcript.

?Janet;	lndicates a strong likelihood that Janet is the speaker.
…	Three dots are used to indicate a pause of untimed length.
??;	Two or more? Marks indicates that this is a new unidentified speaker from the last unidentified speaker.
[. . .]	lndicates material has been omitted at that point.
˚I agree˚	Words between signs ˚ are spoken more quietly by the speaker.
→	This is not part of the transcription. It is placed next to lines which the analyst wishes to bring to the reader's attention.
↑↓	Used to indicate substantial movements in pitch. They indicate out of the ordinary changes, not those characteristic of a particular dialect, for instance.
Heh heh	Indicates laughter which is voiced rather almost as if it were a spoken word rather than the uncontrolled noises that may constitute laughter in some circumstances.
I've wai::ted	The preceded sound is extended proportionate to the number of colons.
Hhh	Expiration – breathing out sounds such as when signaling annoyance.
(what about)	Words in brackets are the analyst's best guess as to somewhat inaudible passages.
((smiles))	Material in double brackets refers to non-linguistic aspects of the exchange.
(??)	Inaudible passage approximately the length between the brackets.

l don 't accept your argument = and another thing l don't think you are talking sense

Placed between two utterances to indicate that there is no identifiable pause between the two. Also known as latching.

= signs placed vertically on successive lines by different speakers

In this context, the = sign is an indication that two (or more) speakers are overlapping on the text between the = signs.

[] placed vel1ically on successive lines by different speakers

As above, but instead the [ ] brackets are used to indicate that two (or more) speakers are overlapping on the text between the brackets.

>that's all I'm saying< Talk between > and < signs is speeded up.

< that's it> Talk between < and> signs is slowed down.

PART 2

WRITING THE REPORT

I. STRUCTURE

A. Regulations for Master's Degree Programs of the RUPP

1. structural sequence of the thesis/research report is as follows:

1. Hard cover (see Appendix 3.1)
2. Title page (see Appendix 3.2). The title should be first stated in the language of the document followed by the title in Khmer. If the thesis/research report is written in Khmer, it should be followed by the title in English.
3. Abstract in Khmer
4. Abstract in the language of the document
5. Supervisor's research supervision statement (see Appendix 3.3)
6. Candidates statement (see Appendix 3.4)
7. Signature sheet (see Appendix 3.5, *not to be bound in theses/research reports*)
8. Result presentation sheet (see Appendix 3.6, *not to be bound in theses/research reports*)
9. Acknowledgements
10. Table of contents
11. List of illustrations (if any)
12. List of tables (if any)
13. List of figures (if any)
14. List of abbreviations (if any)
15. Chapters in sequence
16. References
17. Appendices (if any)

2. between a Thesis and a Research Report

Criteria	Thesis	Research paper
Credit value	12	6
Word length (Khmer script)	Natural Science: minimum 100 pages, paper A4, line spacing 1.5. Social Science and Humanities: minimum 150 pages, line spacing 1.5 paper A4	Natural Science: minimum 60 pages, paper A4, line spacing 1.5. Social Science and Humanities: Minimum 80 pages, A4, line spacing 1.5.
Word length (Roman script)	Natural Science: minimum 20,000, A4, line spacing 1.5, New Times Roman. Social Science and Humanities: Minimum 25,000, A4, spacing 1.5, New Times Roman.	Natural Science: Minimum 10,000 words, A4, line spacing 1.5, New Times Roman. Social Science and Humanities: Minimum 12,500, A4, spacing 1.5, New Times Roman.
Literature Review	At least 10 carefully chosen and evaluated items.	At least 5 carefully chosen and evaluated items.
Theory	Concepts used to be defined and their use evaluated and justified. Interrelationships to be explained.	Concepts and theories used are to be defined.
Methods	Clearly stated and justified. Alternatives considered and reasons for non-use explained.	Clearly stated and justified.
Quality of data	Primary data essential	May be mostly secondary data
Copies required	Six copies, soft bound. Passing theses to be hard bound on completion of examination process.	Four copies, soft bound. Passing research reports to be hard bound on completion of examination process.
Oral defense	Yes, in front of an evaluation committee of five members approved by the Ministry of Education, Youth and Sport.	Yes, in front of a committee of three members approved by the Ministry of Education, Youth and Sport.

B. of a thesis

Usually, the parties of a thesis have to obey to the conventions approved by the scientific community. The designation of the parties and the way they are following are linked to the logic of the research process.

According to Castro (2000), the standard plan in a psychology research master thesis is:

` COVER PAGE

SUMMARY

ACKNOWLEDGMENTS

I. INTRODUCTION

II. THEORETICAL PART (aka LITERATURE REVIEW)
- A. Concept 1 (depending on the research topic)
- B. Concept 2 (depending on the research topic)
- C. Concept 3 (depending on the research topic)
- D. etc...

III. METHODOLOGICAL PART
- A. Definition of the research plan (depending on the research topic)
- B. Definition of the population sample (depending on the research topic)
- C. Definition of instrument choice (depending on the research topic)
- D. etc…

IV. PRACTICAL PART (also called CLINICAL PART)
- A. Presentation of results
- B. Discussion
- C. Originality and limits of the study
- D. Future planned extensions

V. CONCLUSION

BIBLIOGRAPHY

TABLE OF CONTENTS

(INDEX)

APPENDICES

C. of a psychological research report

TITLE PAGE
ABSTRACT
TITLE

I. INTRODUCTION

II. METHOD

III. RESULTS

IV. DISCUSSION

V. CONCLUSION

REFERENCES
APPENDICES

D. structure

1. page

c. regulations for the hard cover page and title page

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Title in English

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In Partial Fulfilment of the Requirement for the Degree of
Master of Arts /Science/Education,…
(Development Studies, Educational Planning, Sociology-Anthropology,..)

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(Month & Year)

d. format for the title page

APA format for Title page

The title page announces the title and running head of a lab report or research article. It gives the article title, author name(s), author affiliation, manuscript page header, running head and page number.

How to Proceed

1. Arrange the title page information on its own page. Center this information from the side margins. Place the title a little more than one-third of the way down the page, where the reader's eyes naturally fall.
    a. **Note:** The APA manual says to center the title. This means to center from the sides, not from the top.

2. Choose a title thoughtfully (see below). Even if you change it later, a descriptive title will help you to stay on track as you write your paper and will convey a good first impression to your readers.

    a. Make the title specific.
        1. NOT: The Effects of Language Complexity on Mental Processing BUT: The Effects of Sentence Complexity on Mental Processing Speed
        2. NOT: Can Stress Predict Memory Accuracy? BUT: Can Stress Level Predict the Accuracy of Eyewitness Accounts?

    b. Try to make a statement or ask a question.
        1. Categorical Discrimination Begins at Birth
        2. Can the Yerkes-Dodson Law Predict Human Performance?

    c. Use plain type face
        1. Keep font and font size consistent, and avoid bolding, italics, or underlining in titles.

Howitt and Cramer (2005, pp. 54-55) expect on this first page:

- the title
- the author
- author details such as their address, e-mail address, telephone and fax number.
- for a student report, this will be replaced with details such as student ID number, degree programme name, and module name.

For the title Howitt and Cramer (2005, pp. 76-77-78) give the following recommendations:

- This is normally centralized and is often emphasized in bold
- Should be informative about study.
- Usually no more than 12 words but sometimes longer.
- Avoid uninformative phrases such as' A study of'.
- A good title will orient the reader to the contents of the research report.

McQueen and Knussen (2006, pp. 368-369) recommend that the title "should be brief, clear, accurate; don't try to be funny or whimsical (10-12 words at most).

2.

The abstract is a detailed summary of the contents of the report.

APA format for the Abstract

Think of the abstract as the "Reader's Digest" version of the report. Its purpose is to show the study at a glance. Writing good abstracts requires knowing which information is essential and how to condense it.

Requirements

Condensed format. Abstracts must be short (APA Manual: 120 words) yet stand alone. This means that the abstract should be understandable to someone who has not read the study.

Order. Arrange information in the same order as the sections in the paper: Introduction, Method, Results, and Discussion. Each section of the paper requires at least one sentence in the abstract. Methods and Results usually require more than one sentence each.

Single paragraph. Abstracts are written as one paragraph.

How to Proceed

1. Write the paper before writing the abstract.
2. Look at abstracts from articles in APA journals and use them as models.
3. Focus initially on content, not length. It is easier to condense than to expand.
4. Look at each section in the paper to determine the main point(s). Underline key sentences or write down the point of each paragraph.
5. Write a first draft, using the same order as you would for the report:
    a. Announce the research question (usually one sentence).
    b. State the purpose of experiment (hypothesis).

c. State the method, including number of subjects and what they did. (requirements will vary by instructor. Some instructors want a synopsis in 1-3 sentences; others want more detail.)
d. State results (1-3 sentences. Some instructors want *p*-values. APA does not require them).
e. Discuss implications (usually only one sentence).

6. Cut out nonessential information. Transitions such as "The results showed..." are unnecessary.

McQueen and Knussen (2006, pp. 368-369) said briefly that it's "what it's about, what was done and what was found".

For Howitt and Cramer (2005, pp. 76-77-78), an abstract or summary should have the following criteria:

- Usually 100 to 200 words long but this may vary. The APA standard is 120 words.
- The abstract is a summary of all aspects of the report. It should include key elements from the introduction, method, findings and conclusions.
- The abstract is crucial in providing access to your study and needs very careful writing and editing.
- Write this last!

For McQueen and Knussen (2006, p. 371) a good abstract contain the following information:

- The research issue being explored – this would comprise the research question, or the theory being investigated in the study.
- The hypotheses being tested predictions which form the basis of the study.
- The design of the study – the way in which it has been set up to explore the hypotheses, expressed in the language of design (e.g., repeated measures, counterbalanced).
- The key (relevant) characteristics of the participants – for example there is little point in offering detail on age in the abstract unless age influenced, or explained, the findings in some way.
- The key (relevant) characteristics of any apparatus used – for example, it findings can be explained only by reference to the specific of apparatus, or if replication could not take place without this particular information.

- The outcome of the study – for example - whether the hypotheses are accepted or rejected, or the key findings.
- Conclusions and a comment on any unusual features of the study, if appropriate.

Howitt and Cramer (2005, pp. 61-62) present a model about the structure of an abstract:

- *Introduction* This is a brief statement justifying the research and explaining the purpose followed by a short statement of the research question or the main hypotheses. The justification may be in terms of the social or practical utility of the research, its relevance to theory, or even the absence of previous research. The research question or hypotheses will also be given. Probably no more than 30% of the abstract will be such introductory material.

- *Method* This is a broad orientation to the type of research that was carried out. Often a simple phrase will be sufficient to orient the reader to the style of research in question. (…)

- *Participants* This will consist of essential detail about the sample(s) employed. (…)

- *Procedure* This should identify the main measures employed. (…) By stipulating the important measures employed one also identifies the key variables. For an experiment, in addition it would be appropriate to describe how the different conditions were created. (…)

- *Results* There is no space in an abstract for elaborate presentations of the statistical analyses that the researcher may have carried out. Typically, however, broad indications are given of the style of analysis. (…) Now these statistical techniques may be meaningless to you at the moment but they will not be to most researchers. They refer to very distinct types of analysis so the terms are very informative to researchers. In addition, the major findings of the statistical analysis need to be reported. Normally this will be the important, statistically significant features of the data analysis. Of course, sometimes the lack of significance is the most important thing to draw attention to in the abstract. There is no need and normally no space to use the succinct methods of the reporting of statistics in the abstract.

- *Discussion* In an abstract, the discussion (and conclusions) needs to be confined to the main things that the reader should take away from the research. As ever, there are a number of ways of doing this. If you have already stated the hypothesis then you need do little other than confirm whether or not this was supported, given any limitations you think are important concerning your research, and possibly mention any crucial recommendations for further research activity in the field.

3.

The introduction of a master thesis is presented as a short chapter. It is a text that guides the reader in introducing the problem and the various elements of the research.

APA format for the Introduction

The goal of the introduction is to justify your study. Introduce the research question, summarize and cite the research done to date, and identify a question that has not yet been answered (your study). At the end of the introduction, state the hypotheses that you tested.

Requirements

Give background. This section gives the history behind your research question. Identify the key research done in the area so far and the value of your study.

Cite all relevant research, not just the studies whose results you agree with. Identify studies that support contradictory findings, and suggest what might underlie the differences (look especially at the introduction and discussion sections of the articles you are comparing).

State hypotheses and predictions. At the end of the introduction, state the hypothesis that you tested and specific predictions that follow from it.

How to Proceed

- **Find an old review article**. Reading a review article or book chapter is an efficient way to start to get an overview of a new research area. Then, to follow up on the important areas and authors you have identified in the article, use online search databases to:
  - Look for later studies by the authors cited in the review article (e.g., PsycInfo).
  - Find other studies that cite the authors cited in the review article (e.g., SSCI, or Social Science Citation Index).

- Make an outline that shows the progression of research that has led to your hypotheses.

- For each main point, start by citing noncontroversial assumptions of findings. Then discuss areas in which conflicting results, if any, have emerged. Try to explain the source of the disagreement (e.g., insensitive measures, inadequate design, conclusions that went beyond the data or didn't go far enough).

- At the end of the introduction, identify questions that have not been addressed that led to your hypotheses. If there are more than one or two hypotheses, list them ('This study will test the following hypotheses: (1) ... (2)... (3) ...'). It may be necessary to give a conceptual overview of the experiment here as well, but save the details for the Method section.

- Avoid plagiarism by giving credit where credit is due. Whenever you cite someone else's

ideas or use their language, give the name of the author and the year of publication (see References; APA citations). Using old review articles as a starting point for your paper is not plagiarism, but don't present someone else's ideas as though they were your own. Your paper must, of course, provide your own synthesis of your research.

- In scientific writing, it is much more common to paraphrase an author's ideas than to use direct quotes (see APA citations). If you use direct quotes, however, also cite the page number, like this: "insert quote here" (Abel, 1989, p. 93).
- Use specific language and support your arguments with concrete examples. Specify referents (e.g., "this illustrates" should be "this experiment illustrates"). Subjective phrases like "I feel" or "I think" often signal unsupported statements that need to be explained.

- Don't hesitate to evaluate and critique what you have read. Many novice writers are good at writing detailed descriptions but balk at evaluating the work of established researchers. Evaluation requires more work and entails more risk, but without it, your paper lacks original synthesis, which falls short of the goal of the paper: to make an original contribution to a research area.

Howitt and Cramer (2005, pp. 76-77-78) give some recommendations for writing an introduction:

- This is not normally given a heading in research reports, unless it is a very long thesis.
- Should be a focused account of why the research was needed. All material should be pertinent and lead to the question addressed by the research.
- Should contain key concepts and ideas together with any relevant theory.
- Avoid using quotations unless their content is to be discussed in detail. Do not use them as a substitute for writing in your own words.
- Consider using subheadings to ensure that the flow of the argument is structured. They can easily be removed once the report is complete.
- Make sure that the argument leads directly to the aims of your research.

The introduction usually contains the following three points:

- Presentation of the researcher's interest for the research topic: personal experiences, training, various readings, special meetings...
- Statement of research problem : originality, relevance, importance, urgency of the study...
- Presentation of experimental hypotheses, research objectives and theoretical framework that serves as a reference to the researcher.

For McQueen and Knussen (2006, pp. 368-369), the introduction should answer the following questions:

- What was this research all about?
- What relevant previous work was there?

- What did they find?
- Is there a central theory or a debate about different theories?
- Was the present study the same (a replication) – if not, how was it different?
- In either case, what were you trying to do (aims)?
- And what did you expect to find (the hypotheses)?

4. Theoretical Part: Literature Review

The literature review is an important step in the research process as it will hold the entire thesis. Indeed, it is both the basis of research and also its orientation.

Also in a research thesis we may say that literature is should read and exposed twice:

- Firstly, it allows to discover and analyze the bulk of current knowledge related to the research topic that is the purpose of the part "Literature Review or Theoretical Part";
- Secondly, a second reading can compare and discuss the results of the research itself with those of other authors: it is the subject of chapter "Discussion" in "Practical Part."

In "Theorical Part", the literature review will inform the reader about the current situation of the subject. For this, it will clearly define the concepts involved in the subject, and present or confront with each other, the different theories or practices relating to the subject.

The final product must be presented in a form which gathers balance, logic and coherence, and not merely is a concatenation of heterogeneous elements.

Also, in the "Theorical Part", it must not have personal opinions: justification is based only on data from the literature.

The literature review may be organized into 3 steps:

a. the documents useful (preparation)

The researcher must choose here the documents he will use to get some information. He may define here some keywords to guide his work. The keywords resume often objects of the study (people, processes, programs…). Through experimental research, keywords are the dependent and independent variables.

Once the keywords and concepts to be analyzed were identified, it is to select the documents relating thereto. Through these documents, different types of data and particularly the differences/similarities, worn/limits will be collected:

- The dominant theoretical perspectives
- The different existing practices, past experiences, future plans...
- Methodological information

b. the relevance of the literature (preparation)

The choice of the bibliography is based on a detailed analysis of theories, methodologies and results. The relevance of a document will be assessed according to:

- The type of study (fundamental research, applied research...);
- The theme or problem;
- The methodology used (sampling, ethical considerations...)…

c. of the research of the literature (writing)

The plan of the "Theoretical Part" can be organized in different ways, depending on the choice of the researcher:

- A perspective of theoretical homogeneity: it is to expose and describe groups of theoretical models that resemble each other and support each other;
- A critical perspective: it is focusing on the merits, but also the weaknesses and shortcomings of previous work to build a personal perspective or innovative;
- A historical perspective: it is present from the year of publication, designs, theories and / or methodological approaches of different authors who studied the subject;
- According to an empirical perspective: it is from the birth of a concept, to follow its evolution and its changes through the various empirical contributions.

5. Presentation of the methodology

The research method is based on a rigorous methodology that is necessary to present clearly and completely in a master thesis: the objective of this part is to provide an accurate and detailed record. Usually, we present again in this part of the problem and hypothesis.

The presentation of the methodology must be complete. Indeed, it is to produce all information necessary for an exact repetition of the research protocol could possibly take place.

APA format for the Method section
The Method section is a detailed breakdown of the experiment, including your subjects, research design, stimuli, equipment used, and what the subjects actually did (the procedure). Give the reader enough information to be able replicate the experiment. **Requirements** The Method section is often divided into subsections, such as Subjects, Design, Stimuli, Equipment, and Procedure. Each subsection should provide only the essential information needed to understand and reasonably replicate the experiment. Very short subsections can be combined (e.g., Stimuli and Equipment). There is no APA rule on the order of subsections.

The order shown below is common.

How to Proceed

Subjects/Participants. State the number of participants (if human) or subjects (if animals), who they were, and how they were selected.

- Participants
  - Ex. We randomly selected 16 University of Washington students from an introductory psychology course to participate in exchange for extra credit.

- Subjects
  - Ex. Subjects were 30 male pigtailed macaques (*Macaca nemestrina*) bred at the Washington Regional Primate Research Center Breeding Colony, Medical Lake, Washington. All animals were bred specifically for this project and were shipped to the laboratory at 3-5 days of age. We randomly assigned subjects to each condition.

Materials. This subsection may also be called Stimuli, Equipment, or Apparatus. It briefly describes the equipment/materials used in the experiment.

- Ex. Eye movements were recorded using an NEC model 120 Eyetracker.

Design. Identify and explain variables and their levels, and state whether the variables are between groups or within subjects.

- Ex. The design was a mixed model with type of information requested, type of emotion, and sex as the between-subjects factors.

- Ex. Heart rate and blood pressure were the within-subjects factors.

Procedure. Describe in sequence the procedures used.

- Subjects were seated at a computer work station. After completing a demographic questionnaire, they received written instructions that differed by condition. All subjects were instructed to read a business letter and write a reply. Subjects in the multiple draft condition were told to write an outline of a reply letter before writing a final draft.

For Howitt and Cramer (2005, pp. 76-77-78), this part contains specific points:

- This is a centralized, main heading.
- Sections should include participants, materials or apparatus, procedure, possibly design in complex cases, stimuli and (recommended) ethical considerations.
- It is difficult to judge the level of detail to include. Basically the aim is to provide enough detail that another researcher could replicate the study in its essence.
- Do not regard the structure as too rigid. It is more important to communicate effectively than to include all sections no matter whether they apply or not.

The "Methodology" chapter consists of four sub-headings sections at a minimum, setting out the structure of the study, as follows: (inspired by McQueen and Knussen, 2006, pp. 368-369)

a. and definition of the research plan

What sort of study was it (e.g., an experiment, a survey, a case-study)?
Repeated measures design, independent groups, or a mixed design?
What were the dependent variables (what was measured)?
What were the independent variables (what varied across different participants)?

- Type of plan: experimental, non-experimental...
- Precise course of study: step by step, procedures for collecting data...
- Ethical considerations

b.

How many? Any relevant description.
Definition of the sample
Presentation of the study population and description of the characteristics of participants:

- Number of participants
- Age
- Sex
- Socio-economic
- + Specific features of the search

c.

What materials or equipment were used? Definition of measuring instruments. Presentation of the tests and justification of the choice to use them to show that the instrument has been chosen knowingly; Psychological Tests: Need to submit a brief of test used, its construction and the results it brings.

- Questionnaire: Presentation of the questionnaire and explanation of their construction;
- Observation Grid: In the case of the use of clinical observation, the researcher must include the observation grid containing all the parameters that have been observed and measured during the observation.
- Question Schedule: In the case of clinical interviews, the researcher must present the guide that summarizes the various themes that were discussed.

d.

Briefly describe what happened. Quote instructions given to the participants.

6. Clinical Part (Practical)

We find here two main parts: the results presentation and the discussion

a. of the results

This chapter contains only the results: interpretation or discussion is the subject of the chapter entitled "Discussion."

The chapter presents all the results related to the research hypotheses.

APA format for the Results part

This section presents the statistical analysis of the data collected. It is often less than a page long.

Requirements

Condensed format. The Results section is the most condensed and standardized of all the sections in the text of a lab report.

No data interpretation. Statistical results are presented but are usually not discussed in this section. Discuss results in the Discussion section.

How to Proceed

- Keep your hypotheses in mind while you write. Each result must refer to a stated hypothesis.
- Describe all results that are directly related to your research questions or hypotheses. Start with hypotheses you were able to support with significant statistics before reporting nonsignificant trends. Then describe any additional results that are more indirectly relevant to your questions.
- If you present many results (i.e., many variables or variables with many levels), write a brief summary, then discuss each variable in separate subsections.
- Report main effects before reporting contrasts or interactions. Briefly mention problems such as reasons for missing data, but save discussion of the problems for the discussion section.
- Use tables and figures to summarize data. Include descriptive statistics (such as means and standard deviations or standard errors), and give significance levels of any inferential statistics. The goal is to make your results section succinct and quantitatively informative, with no extra words (see also our handout, APA Table Guidelines).

- For each test used, provide degrees of freedom, obtained value of the test, and the probability of the result occurring by chance (p-value). Here are examples of the results of a t-test and an F-test, respectively: $t(23) = 101.2$, $p < .001$; $F(1,3489) = 7.943$, $p < .001$ (see also our handout Reporting statistical results in APA format).

For McQueen and Knussen (2006, pp. 368-369) it is "a written presentation of summary or descriptive statistics, not individual participant data. If any graphs or tables help clarify the results, put them in here, but don't merely duplicate tabular data – figures are useful only if they clarify or highlight data in a manner not possible with tables. Report the statistics used, and say briefly whether or not the results supported the hypotheses".

Howitt and Cramer (2005, pp. 76-77-78), give some recommendation for this results part:

- This is a centralized, main heading.
- The results are intended to be the outcomes of the statistical analysis of the data. Quite clearly, this is not appropriate for many qualitative studies.
- Do not evaluate the results or draw general conclusions in the results section.
- Remember that tables and diagrams are extremely important and need to be very weIl done. They help provide a structure for the reader. So good titles, labeling and general clarity are necessary.
- Do not leave the reader to find the results in your tables and diagrams. You need to write what the results are below – you should not leave it to the reader to find them for themselves.

As always, in the scientific community there are a number of conventions related to the presentation of results.

- The results are ordered and presented in order of importance of assumptions.
- All results must be written under text form, although some are presented in statistical analyses, tables, graphs or diagrams (see also the part about the using of tables, graphs and figures);
- Raw data (grades, scores, etc.) are not included as such in this section, but in the form of descriptive statistics (average, standard deviation, etc..) or inferential (testing of significance, factor analysis, etc.).
- It is necessary to recall each type of statistical review which has been used for analyzing the raw data;
- The conclusions of the results obtained are first set and then justified with reference data or statistical analysis that can support them.

McQueen and Knussen (2006, pp. 382) are mentioning questions about the result section:

- Have you presented descriptive statistics, and do these represent the data fairly and adequately?
- Do the results deal with each of your hypotheses?
- Are your results presented appropriately?
- Are all tables and figures correctly labeled?
- Is it possible to assess the outcome of the study by consulting the results alone, without the need to refer to other sections of the report?
- Have you included results that are not relevant to the research issue in general or the hypotheses in particular, or to which you do not refer again?

b.

The chapter "Discussion" is the decisive chapter of the thesis research. Its quality depends on the careful treatment of its parts and the use of an accurate and appropriate vocabulary, it also depends on the balance between personal views and those of other authors.

APA format for the Discussion

In this section, interpret your results by relating them to your hypotheses. Use words to explain the quantitative information from the results section.

Requirements

Discuss the results in relation to each hypothesis. This is the most important part of the Discussion section.

Discuss possible explanations for your results. This part should follow from the predictions you made earlier based on possible outcomes of the study. Do the results agree or disagree with the ideas that you introduced in the Introduction? How do the results relate to previous literature or current theory? Identify and discuss limitations in the experimental design that may reduce the strength of your results.

Generalize your results. This is where you tell the reader the extent to which your study is externally valid. Discuss strengths and weaknesses of applying your results to, for example, another population, species, age, or sex.

Identify followup experiments. Introduce new ideas that your results suggest, and propose ways to test them.

How to Proceed

- Explain whether your results support the hypotheses.

- Discuss how the results relate to the research question in general.
    - The results are consistent with the Yerkes-Dodson law.
    - These results show the advantage of using a secondary reaction time paradigm for assessing cognitive load during reading.
    - The finding that the infant monkeys increased their food intake in the low-calorie condition and reduced food intake in the high calorie condition is consistent with the hypothesis that pigtailed macaques adjust their food intake to maintain a constant level ofcaloric intake. Although the difference between the two conditions decreased across time, however, the infants consumed more calories in the high-calorie condition than the low-calorie condition.

- If you had a directional hypothesis and your results didn't turn out as expected, discuss possible explanations as to why, including unanticipated shortcomings in the design, problems such as equipment failure, or even that the theory you tested may need modification. Show how your explanation accounts for the specific pattern of results.
        - NOT: One reason for this puzzling result could be that some subjects received different instructions. Another possible reason might be that the room was hot. A third possibility is that we should have . . .
    - This example is not well written for two reasons. First, the reasons are unsupported. The author does not explain how these reasons may have led to the unexpected pattern of results. Second, probably because of this lack of justification, the author's use of "could" and "should" does not sound confident.
        - BETTER: One possible explanation for this result is that experimental subjects received slightly different instructions than control subjects. Subjects in the control condition were told to press [1] for "yes", but subjects in the experimental condition were told to press [y] for "yes". Because [1] and [y] are positioned apart on the computer keyboard, the extra time required to find [y] may account for the overall longer reaction time in the experimental condition. Another unexpected variable was that the ventilation in the room malfunctioned and the room was over 750F. Although this made the test situation uncomfortable, the room temperature affected all subjects equally, so we do not regard this extraneous variable as a confound, but it could have affected the validity of the results if subjects performed more poorly as a result.

- Discuss limitations of the experiment that could be remedied in future experiments. State the specific reason for performing the next experiment. Do not assume that anything is obvious.
    - Although we controlled the level of subject arousal, we did not control the type of arousal (negative or positive). A future study in which we assessed the effects of negative versus positive arousal on eyewitness accuracy would enable us to refine Yerkes-Dodson predictions.

- Avoid overstating the importance of your findings. Be modest rather than expansive. Avoid

speculating beyond the data.

- Stay focused on the research question. Resist the urge to digress or to state glittering generalities just because this section is the most flexible one.

- Although you should acknowledge problems or weaknesses of your design, end the paper on a high note.

- Summarize the study's strengths, conclusions, implications and/or ideas for future research.

For McQueen and Knussen (2006, pp. 368-369), the discussion part is "an examination of your results in light of your hypotheses or research questions, and in comparison with previous findings".

Howitt and Cramer (2005 pp. 76-77-78) make some recommendations:

- The discussion is the discussion of the results. It is not the discussion of new material except in so far as the new material helps in understanding the results.
- Do not regurgitate material from the introduction here.
- Ensure that your findings are related back to previous research findings.
- Methodological differences between your study and previous studies which might explain any disparities in the findings should be highlighted. Explain why the disparities might ex plain the different outcomes.
- The discussion should lead to the conclusions you may wish to draw.

The researcher needs to give answer to the following questions (McQueen and Knussen, 2006, pp. 368-369):

- What conclusions do your results point to?
- How do you interpret your findings?
- You could also suggest improvements or variations in the design, or further hypotheses which might be tested.

McQueen and Knussen (2006, p. 388) listed some question to guide the researcher for his discussion:

- Have you discussed all of the important issues raised in your introduction?
- Have ideas crept in to the discussions which are not really related to the study?
- Does the discussion concentrate purely on the findings, or does it consider broader issues?
- Conversely: does your discussion take sufficient note of the actual findings?
- Are there any findings which you have not discussed?

- Have you considered whether your data might support an explanation other than the one you prefer?
- Does the discussion point to original thinking?
- Are your conclusions clear?

The objectives of a good discussion are:

- Convey a strong message to potential readers;
- Produce a demonstration balancing viewpoints of recognized researchers and personal views;
- Show the possible consequences of the significant results of research both in theory and for practice.

As a general practice, any discussion is organized in a logical order with five sub-sections:

- The summary of significant results

First, it is to present an integrative summary of the results. This summary is not an exact copy of the "results part", it takes only the conclusions of the work, but does not show the numbers or statistics.

By placing the summary of the results in the general context of hypothesis, it will be possible to show whether they confirm or disprove the initial hypotheses.

This section also presents results 'accidental', that is to say those whose analysis was not originally planned but appears significant. Often, these "findings" represent one of the most interesting discussion.

- The interpretation of significant results

The interpretation of results is the preferred tool for discussion. As part of a research, to interpret means to translate the numerical results in a usable psychological knowledge, making them comprehensible, give them a sense.

Results must be put in perspective with the existing literature, with current research, sometimes contradictory. In this case, the contribution of tracks explaining the contradiction is necessary.

- The implications of the results

This sub-chapter can offer a theoretical perspective and practical impact of results on the observed phenomenon.

- From a theoretical point of view, it is to place the interpretations of results in a larger conceptual context and discuss their possible generalization. It is therefore possible to extrapolate when the results match to other situations than those analyzed during the

research. It is also possible to broaden the interpretation of results in other areas of interest close to the research.

- From a practical point of view, it is to consider how a health professional, education or labour can use the results on the ground in its daily operations or as a way for changing current practices.

    - Originality and limitations of research;

In this subchapter, it should be modest about what has been achieved because a research can be done only on a limited phenomenon in time and space. Firstly, it is recognized that the research presented is not perfect and to examine critically its strengths and limitations.

Usually the limitations of a research may come from two different sources:

- The design of research protocol: the choice of participants, measures, etc.. ;
- Problems occurred during data collection: sample smaller than expected limiting the statistical power; demographic variables impossible to control, use of a single measuring instrument etc.

The discussion evaluates how these imperfections affect the validity of the results, level of interpretation and / or their possible generalization.

    - Future planned extension

The research often raises more questions than answers. All research needs to consider possible extensions to show what would be done to explore further the subject.

7.

The conclusion part is organized around three main points:

- It provides a brief summary of all research, results, interpretations made.
- It integrates this research into a broader context, for example by presenting the contributions of this research for the entire profession for the study population...
- Finally, for a master thesis, students can also discuss their personal experiences to make this thesis, its interests, its contributions...

8.

For Howitt and Cramer (2005, pp. 54-55) the appendices are “an optional section and is relatively rare in professional publications. Usually it contains material which is helpful but would be confusing to incorporate in the main body of the text”.

McQueen and Knussen (2006, pp. 368-369) consider appendices as a “location for the raw materials used in the study – stimuli, examples of questionnaires and so on. Raw data and

computer printouts are not recommended, unless there is a case for inclusion. Supervisors will normally inform you of their expectations here".

Also, Howitt and Cramer (2005, pp. 76-77-78) give more information about appendices:

- These are uncommon in published research reports largely because of the expense. However, they can be a place for questionnaires and the like. For student reports, they may be an appropriate place for providing the raw data.
- The appendices should be numbered (Appendix l, Appendix 2, etc.) and referred to in the main text. For example, you may refer to the appropriate appendix by putting in brackets.
- As much work should go into the appendices as other components of the report. They should be clear, carefully structured and organized.

9. checklist when writing the report

(Foster and Parker, 1995, pp. 207-208)

If you check all these points, you will avoid many of the commoner mistakes that students make.

(l) Title: does it provide a concise, clear statement of the study?
(2) Is the author indicated?
(3) Does the abstract cover the aim, participants, procedure, findings, and interpretation? It should not usually exceed 5 sentences.

Introduction

(4) Does it provide a clear summary of an acceptable amount of previous work on the topic?
(5) Does it include up-to-date references?
(6) Have you ensured you have omitted irrelevant material?
(7) Does the aim of the study develop naturally from the previous work mentioned?
(8) For quantitative studies, have you stated a hypothesis in terms of a precise prediction?

Method

(9) Have you described the participants and, if relevant to the type of study you are reporting, the order of conditions and testing, and the materials used?

Procedure

(10) Have you given an account of what happened so that a reader could repeat the study? Have you checked that it does not include trivialities?

Results

(11) Does this section start with a sentence?
(12) Have you labeled and given an informative title to all tables and any figures?
(13) Have you checked the formatting of tables and graphs?
(14) Is the statistical analysis summarized correctly?
(15) Are details of calculations in an appendix and clearly labeled?

Discussion

(16) Have you summarized the outcome?
(17) Have you mentioned any flaws in the procedure which would lessen the study's validity?
(18) Have you referred to the previous work you mentioned in the introduction and compared the outcome with it?
(19) Have you tried to indicate the theoretical implications of your findings?
(20) Have you made some suggestions about further research which would be a natural development of what you have found?

References

(21) Have you checked that all references are listed?
(22) Are references in the proper order?
(23) Are all references complete, with journal title, page numbers, etc.?
(24) Have you acknowledged which references you have not read yourself?

Appendices

(25) Have you listed the materials you used?
(26) Have you recorded the full set of data?
(27) Are all appendices provided with an informative title?

Generally

(28) Have you ensured you do not say you have 'proved' a hypothesis or a theory?
(29) Have you made sure that if you describe the study as an experiment, it is an experiment?
(30) Have you checked for spelling and grammatical errors?
(31) Have you numbered the pages and put them in the correct sequence?
(32) Have you made a copy of the report?

II. ANALYSIS

Making Connections (Glesne, C., 2006, pp. 166-167)

Data transformation is of course an invariable aspect of all types of research, qualitative or otherwise. It is the effort of researchers to manage and make sense of their data, to transform

it from its acquired form-at which point it is perhaps more accurately called “information”- into a form that communicates the promise of a study’s findings.

Wolcott (1994) discusses description, analysis, and interpretation as three means of data transformation, or of moving from organization to meaning.

- Description involves staying close to data as originally recorded.
- Analysis, according to Wolcott, is the identification of key factors in the study and the relationships among them. (…) It entails identifying essential features and the ways in which the features interact. Detailed coding schemes, data displays, comparisons to a standard, and other means of identifying patterned regularities are all useful in analysis.
- Interpretation is Wolcott’s (1994) third means of data transformation. He notes that interpretation occurs when the researcher “transcends factual data and cautious analysis and begins to probe into what is to be made of them”. He discusses several strategies for data interpretation, including extending the analysis, using theory to provide structure, connecting with personal experience, and exploring alternative means of presenting data.

Trustworthiness of your interpretations

Hollway and Jefferson (2000) identify four core questions researchers should ask themselves as they work with their data. Each question is linked to the trustworthiness of analytical interpretations:

1. What do you notice?
2. Why do you notice what you notice?
3. How can you interpret what you notice?
4. How can you know that your interpretation is the ‘right’ one?

“What do you notice?” suggests that when you notice one thing, you do not notice something else. Ask yourself “Whom do I not see? Whom have I seen less often? Where do I not go? Where have l gone less often? With whom do l have special relationships, and in what light would they interpret phenomena? What data collecting means have I not used that could provide additional insight?”

The second question, “Why do you notice what you notice?” indicates the need to reflect upon your subjectivity in terms of what you observe and hear, and to engage in reflexivity, critically thinking about the research process as a whole. Continual alertness to your own biases and theoretical predispositions assists in producing more trust worthy interpretations. Reflect upon how your commitments lead you to behave and interpret in particular ways. Also reflect upon how what you notice is shaped by the research setting and participants in their reactions to you. What is it that research participants want you to see and why?

To address the third question, "How can you interpret what you notice?", time is the most important consideration. Lincoln and Guba (1985) describe prolonged engagement (spending sufficient time at your research site) and persistent observation (focusing in detail on those clements that are most relevant to your study) as critical in attending to credibility: "If prolonged engagement provides scope, persistent observation provides depth" (304). Time at your research site, time spent in interviewing, and time building sound relationships with participants all contribute to trustworthy data.

The fourth question, "How can you know your interpretation is the right one ?" suggests the enlistment of others to provide feedback. Share the interpretive process with research respondents as a form of member checking. Obtaining the reactions of research participants to your working drafts is time-consuming, but doing so may (1) verify that you have reflected their perspectives; (2) inform you of sections that, if published, could be problematic for either personal or political reasons; and (3) help you develop new ideas and interpretations.

By sharing working drafts, both researcher and researched may grow in their interpretations of the phenomena around them. To assist in your interpretations, do not forget the invaluable assistance of friends and colleagues. Ask them to work with portions of your data-developing codes, applying your codes, or interpreting field notes to check your perceptions.

III. AND REFERENCES

APA format for the References
Below are the most common citation styles used for writing lab reports (see also pp. 194-221 of the APA Manual, 5th ed., and APA citations handout). **Requirements** **Use APA format** unless instructed to do otherwise. Capitalization, spacing, punctuation, and underlining must be exactly as specified. Correct APA style is important because it will make your paper easier to read and help you to present information accurately. Keep in mind that publishers convert APA-formatted manuscripts into the specific format used in their journal (and non-APA journals may not even use APA style), so don't just copy a style that you see in a journal. **How to Proceed**

- List all authors cited in the text in alphabetical order. Do not list authors that you did not cite in the text, or cite authors of primary citations when you read only the secondary citation (see APA citations).

- Use the correct citation format for each source (see examples below, the APA manual, or APA citations).

- Double-space each citation, indenting each line after the first (hanging indent). Instructors may allow older formats, or single spacing with a double space between references, but this is not APA format.

Examples:

Journal with one author:

Sanders, G. P. (1990). Animal models of discrimination learning. *Journal of Learning and Behavior, 81,* 635 - 647.

Journal with two or more authors:

Becker, L. J., & Seligman, C. (1996). Infant social behavior: Developmental issues. *The Development of Children, 5,* 1 - 43.

Book:

Bernstein, T. M. (1965). *The careful writer: A modern guide to English usage.* New York: Atheneum.

A study cited within a later study (secondary citation):

Smith (cited in Jones, 1996) argued that …

The example above refers to a 1996 paper by Jones (which you read), in which Jones cited a 1954 paper by Smith (which you did not read). Always try to read the original article (see APA citations for an explanation). If you think that you must refer to Smith's study, but you are unable to read Smith's paper, then cite only Jones in the reference list. In the text, cite Smith, but not the year of Smith's study, as shown above.

When using APA format, follow the author-date method of in-text citation. This means that the author's last name and the year of publication for the source should appear in the text, E.g., (Jones, 1998), and a complete reference should appear in the reference list at the end of the paper.

If you are referring to an idea from another work but **NOT** directly quoting the material, or making reference to an entire book, article or other work, you only have to make reference to the author and year of publication in your in-text reference.

Citing an Author or Authors

A Work by Two Authors: Name both authors in the signal phrase or in the parentheses each time you cite the work. Use the word "and" between the authors' names within the text and use the ampersand in the parentheses.

Research by Wegener and Petty (1994) supports...
(Wegener & Petty, 1994)

A Work by Three to Five Authors: List all the authors in the signal phrase or in parentheses the first time you cite the source.

(Kernis, Cornell, Sun, Berry, & Harlow, 1993)

In subsequent citations, only use the first author's last name followed by "et al." in the signal phrase or in parentheses.

(Kernis et al., 1993)

In *et al.*, *et* should not be followed by a period.

Six or More Authors: Use the first author's name followed by et al. in the signal phrase or in parentheses.

Harris et al. (2001) argued...
(Harris et al., 2001)

Citing Indirect Sources

If you use a source that was cited in another source, name the original source in your signal phrase. List the secondary source in your reference list and include the secondary source in the parentheses.

Johnson argued that...(as cited in Smith, 2003, p. 102).

Note: When citing material in parentheses, set off the citation with a comma, as above.

Electronic Sources

If possible, cite an electronic document the same as any other document by using the author-date style.

Kenneth (2000) explained...

Unknown Author and Unknown Date: If no author or date is given, use the title in your signal phrase or the first word or two of the title in the parentheses and use the abbreviation "n.d." (for "no

date").

Another study of students and research decisions discovered that students succeeded with tutoring ("Tutoring and APA," n.d.).

Sources without Page Numbers

When an electronic source lacks page numbers, you should try to include information that will help readers find the passage being cited. When an electronic document has numbered paragraphs, use the ¶ symbol, or the abbreviation "para." followed by the paragraph number (Hall, 2001, ¶ 5) or (Hall, 2001, para. 5). If the paragraphs are not numbered and the document includes headings, provide the appropriate heading and specify the paragraph under that heading. Note that in some electronic sources, like Web pages, people can use the Find function in their browser to locate any passages you cite.

> According to Smith (1997), ... (Mind over Matter section, para. 6).

Short Quotations

If you are directly quoting from a work, you will need to include the author, year of publication, and the page number for the reference (preceded by "p."). Introduce the quotation with a signal phrase that includes the author's last name followed by the date of publication in parentheses.

> According to Jones (1998), "Students often had difficulty using APA style, especially when it was their first time" (p. 199). Jones (1998) found "students often had difficulty using APA style" (p. 199); what implications does this have for teachers?

If the author is not named in a signal phrase, place the author's last name, the year of publication, and the page number in parentheses after the quotation.

> She stated, "Students often had difficulty using APA style," but she did not offer an explanation as to why (Jones, 1998, p. 199).

Long Quotations

Place direct quotations longer than 40 words in a free-standing block of typewritten lines, and omit quotation marks. Start the quotation on a new line, indented five spaces from the left margin. Type the entire quotation on the new margin, and indent the first line of any subsequent paragraph within the quotation five spaces from the new margin. Maintain double-spacing throughout. The parenthetical citation should come after the closing punctuation mark.

> Jones's (1998) study found the following:
> Students often had difficulty using APA style, especially when it was their first time citing

sources. This difficulty could be attributed to the fact that many students failed to purchase a style manual or to ask their teacher for help. (p. 199)

Summary or Paraphrase

If you are paraphrasing an idea from another work, you only have to make reference to the author and year of publication in your in-text reference, but APA guidelines encourage you to also provide the page number (although it is not required.)

According to Jones (1998), APA style is a difficult citation format for first-time learners. APA style is a difficult citation format for first-time learners (Jones, 1998, p. 199).

The passages which come from a book must be in quotes, then followed in parentheses by the name of the author, year of publication of the book and page number. According to the choice of the student, it may include features in the text after the citation, or in the footnotes page.

Ex:

"Ego structure is a cultural precipitate ; character is the special variation of each individual to this culture norm" (Kardiner A. and Linton, R., 1931, p. 132)

or

"Ego structure is a cultural precipitate ; character is the special variation of each individual to this culture norm"[1]

Then in the bibliography the book should appear as follows:

Name of author / POINT AREA / Initial of first name / POINT AREA / Date of publication of the book in brackets / POINT AREA / Book title in italics / BRIDGE AREA / City of editing structure / TWO POINTS AREA / Publisher of the book / POINT

With our example, this become:

KARDINER A. et LINTON, R. (1931). The Individual and His Society. Santa Barbara : Greenwood Press.

The bibliography must then include the authors alphabetically or chronological if necessary. It list of the sources that one has cited in the body of the text.

[1] Kardiner A. and Linton, R., 1931, p. 132

Howitt and Cramer (2005, pp. 76-77-78) give more elements:

- This is an alphabetical list of all the things that you have read when preparing the report.
- The sources are given in a standard fashion for each of journal articles, books, reports, unpublished sources and internet sites.
- Multiple references by the same author(s) published in a single year are given letters, starting with 'a', after the date to distinguish each Ce.g. 2004a, 2004b).
- If you wish to cite sources which you have only obtained from secondary sources (i.e. you have not read the original but, say, read about it in textbooks) then you must indicate this.

1. according to APA guidelines

(McQueen and Knussen, 2006, pp. 389-390)

a. articles

Single authorship

Likert, R. A. (1932). A technique for the measurement of attitudes. *Archives of Psychology*; *140,* 55.

Joint authorship

Johnson, M. H., Karmiloff-Smith, A., & Patry, J. L. (1992). Gan neural selectionism be applied to cognitive development and its disorders? *New Ideas in Psychology*, *10,* 35-46.

Note that (a) capital letters are not used in the titles of the articles except at the beginning of sections (or when proper names are used); (b) inverted commas are not used; (c) journal names are given in full; (d) journal names and volume numbers are italicized (or underlined, if you are not using a word-processor).

b. and chapters in books

Single authorship

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ad.). Hillsdale, NJ: Erlbaum.

Joint authorship

Potter, J., & Wethere, J, M. (1987). *Discourse and social psychology: Beyond attitudes and behavior.* London: Sage.

Chapter

Burman, A. (1994). Interviewing. In P. Banister, E. Burman, 1. Parker, M. Taylor, & C. Tindall (Eds.), *Qualitative methods in psychology: A research guide* (pp. 49-71). Buckingham: Open University Press.

Note that (a) capitals are not used in the titles except at the beginning of sections (although it is acceptable to use capitals for main words in book titles); (b) inverted commas are not used; (c) book titles are italicized (but not chapter titles); (d) page numbers are given if specifically referred to or quoted from in the text; (e) place of publication, then publishers, are cited last.

c. in the text

Direct

Archer (1991) found higher testosterone levels in the more aggressive group.

Indirect

Higher testosterone levels were found in the more aggressive group (Archer, 1991).

d. sources

Online periodical

Author, A., Author, B., & Author, C. (date). Title of article. *Title of periodical, volume*, start page-end page. Retrieved month, day, year, from source/URL.

Online document

Author, A. (date). Title of work. Retrieved month, day, year, from source/URL.

2. what you haven't actually read

(Howitt and Cramer, 2005, p. 72)

The basic rules of citations are clear.

> You indicate the source of the idea in the text just like this (Conqueror, I066) and then put where the information was found in the reference list. This is all very well in theory but in practice causes problems in relation to student work. The difficulty is that the student may only have read textbooks or other secondary sources and they may not be able to get their bands on Conqueror (1066). Now one could simply cite the textbook from which the information came but this has problems. If one cites the secondary source it reads like the secondary source was actually responsible for the idea which they were not.

So what does the student do?

> There are three, probably equally acceptable, ways of doing this in student work:
>
> 1. In the main body of the text give the original source first followed by cited in then the secondary source (Conqueror, 1066, cited in Bradley, 2004). Then in

the reference list simply list Bradley (2004) in full in the usual way. This has the advantage of keeping the reference list short.

2. In the main body of the text give the original source (Conqueror, 1066). Then in the reference list insert

   Conqueror, W. (1066). Visual acuity in fatally wounded monarchs. Journal of Monocular Vision Studies, 5 (3),361-72. Cited in Bradley, M. (2004). Introduction to Historical Psychology. Hastings: Forlom Hope Press.

   This method allows one to note the full source of bath the primary information and the secondary information.

3. In the main body of the text give the original source (Conqueror, 1066). Then in the reference list insert

   Conqueror, W. (1066). Cited in Bradley, M. (2004). Introduction to Historical Psychology. Hastings: Forlom Hope Press.

IV.

Plagiarism, in all its forms, is taken very seriously by the Department of Psychology in the RUPP.

It's plagiarism if:

- copying sentences or parts of sentences, word for word or nearly so, a text written by someone else, without following the rules of the quote mentioned below;
- you write some ideas you found in articles or books as if they are yours, without reference to the original authors;
- you copy the work (or part of the work) of another person, present the work of another as if it is your own or let someone else copy your work and this, even if you worked together.
- Even one sentence copied constitutes plagiarism.

To avoid plagiarism in your assignments you have to:

- prepare assignments yourself, in your own words - it is also the evidence that you understand what an author wrote;
- if necessary, insert the words of another author quoted in italics or in a block indented and always indicate the source of the quotation, in a bibliographic style recognized
- cite the author or authors of the original ideas in your work and this even if you use your own words;
- include in your bibliography, document cited and those who have contributed directly to development of ideas expressed in your work.

Ethical standards in reporting research

It is ethically wrong to fabricate data. Remember that this applies to students. Of course, errors may inevitably be made in published data – this is most likely to be a computational or statistical error. The researcher, on spotting the error, should take reasonable efforts to correct this. Among the possibilities are corrections or retractions in the journal in question.

Plagiarism

Plagiarism is when the work of another person is used without acknowledgement and as if it was one's own work. Psychologists do not plagiarise. Ethical principles hold that merely occasionally citing the original source is insufficient to militate against the charge of plagiarism. So, copying chunks of other people's work directly is inappropriate even if they are occasionally cited during this. Of course, quotations clearly identified as such by the use of quotation marks, attribution of authorship, and citation of the source are normally acceptable. Even then, quotations should be kept short and within the limits set by publishers, for example.

V. OF TABLES, GRAPHS AND FIGURES

APA format for the Tables and Figures

Tables and figures often represent results more clearly and concisely than does text.

Requirements (for a more detailed discussion, see APA Manual, 5th ed., pp. 120-162):

Captions. All tables and figures require captions. Place table captions above the table. Place figure captions on a separate page from the figure, called the Figure Captions page. If your instructor allows you to put captions on the same page as the figure, put the caption under the figure. The caption consists of the figure number in arabic numerals and a clear, specific description of the table or figure. Use complete sentences in figure captions.

Labels. Number the tables and figures separately.

Footnotes. Use footnotes in tables to explain missing data and any other key information that doesn't fit in the table itself.

Align margins. Line up columns of numbers on the decimal points. Line up text along the left margin of a column.

References to text. Tables and figures are supplements to the text and should not duplicate

text. If you include a table or figure, you must refer to it in your paper. Refer to tables and figures by their numbers either in the text or in parentheses.

How to Proceed

- To get an idea of the type of content normally included and the formatting used., look at the APA manual or published articles for examples of tables and figures.
- Tables save more space, but figures have a greater visual impact.
- Use tables to summarize data when the information is too wordy for the text (e.g., number of subjects, means and standard deviations, p-values).
- Use figures to help the reader visualize patterns of results.
- Design the table or figure to stand alone, as an independent source of information. Captions, variable labels, and value labels should be precisely worded.
- Have someone else critique the table or figure for thoroughness and ease of understanding.
- Allow time to design tables and figures. They are not easily done at the last minute. Sloppy graphics make tables and figures hard to understand.

A. of tables

The presence of tables is very useful in a chapter as that of "presentation of the results", because these can communicate more clearly something already existing.

Typically, a table is constructed according to the same frame:

- The title which usually indicates the number of the table and describes the type of data it contains;
- Lines include various aspects of the dependent variables. This is the first column on the left;
- The columns include the subcategories of a variable that reflects the number of respondents/percentage.

B. of graphics

The main purpose of a graphic is to present data more directly than a table. It helps to guide the interpretation. The most common graphics are orthonormal, histogram, circular...

C. and figures

(McQueen and Knussen, 2006, pp. 385-386)

Tables

- A table complements the content of the text. It should not duplicate it but should add something to the clarity of expression which is not possible within the text al one. Otherwise there is no need for a table.
- A table should be referred to in the text by its identifying number with key points noted.
- A table should be self-explanatory. If the reader has to refer to the text to understand what the table is showing or why it is there, the table has failed in its purpose.
- Tables should be numbered sequentially as they appear. Letter suffixes are not recommended.
- Tables should be identified by a title which is intelligible and supported by footnotes if abbreviations or special features are to be explained.
- The format of tables should be standardized. The APA (2001) guidelines encourage the use of horizontal lines to subdivide a table and discourage the use of vertical lines.

Figures

- Everything which offers a pictorial presentation is termed a figure. This includes photographs, drawings and charts; although in most undergraduate reports the chart is the most frequent form of figure.
- A figure complements the content of the text. It should add something to the clarity of expression which is not possible within the text alone or which would be unclear from a table. Otherwise there is no need for a figure.
- A figure should be referred to in the text by its identifying number with key points noted.
- A figure should be self-explanatory with the axes clearly labeled and scaled. If the reader has to refer to the text to understand what the figure is showing or why it is there, the figure has failed in its purpose.
- Figures should be numbered sequentially as they appear. As with tables, letter suffixes are not recommended.
- Figures should be identified by a title which is intelligible and supported by footnotes if abbreviations or special features are to be explained.

- The format of figures should be standardized within a report, especially if comparisons are to be drawn.

- Over-embellishment is to be discouraged. Figures should be simple and offer an immediate impression of the data. If figures need to be closely inspected to determine trends they have lost any advantage they might have over a table.

Tables and diagrams

(Howitt and Cramer, 2005, pp. 76-77-78)

- These should be placed in the text at appropriate points and their presence indicated in the text (with phrases such as 'see Table 3'). In work submitted for publication tables and diagrams are put on separate pages. Their approximate location in the text is indicated by the phrase 'Table 5 about here ' inserted in the text and centralized.
- Tables and diagrams are key features of an effectively communicating report. There should be a balance between keeping their numbers low and providing sufficient detail.
- They should be numbered and given an accurate and descriptive title.
- All components should be carefully labeled – e.g. axes given titles, frequencies; indicated to be frequencies and so forth.
- Avoid using a multitude of virtually identical tables by combining them into a clear summary table or diagram.
- Remember that well constructed tables and diagrams may be helpful to the reader as a means of giving an overview of your research.

VI. WRITING STYLE

(Howitt and Cramer, 2005, pp. 55-56-57)

Overall writing style

- Keep sentences short and as simple as possible (…)

- It is useful to use subheadings (as well as the conventional headings). (…)

- It is normally inappropriate to use personal pronouns such as 'l' and 'we' in a research report. However, care needs to be taken as this can lead to lengthy passive sentences. In an effort to avoid 'We gave the participants a questionnaire to complete.' The result can be the following passive sentence: 'Participants were given a questionnaire to complete. (…)

- The dominant tense in the research report is the past tense. (…)

- Remember that the tables and diagrams included in the report need to communicate as clearly and effectively as the text. (…)

- Avoid racist and sexist language and other demeaning and otherwise offensive language about minority groups. (…)

- Numbers are expressed as 27.3.7. etc. in most of the text except where they occur as the first words of the sentence. In this case, we would write; 'Twenty seven airline pilots and 35 cabin crew completed the alcoholism scale.'

- It is a virtue to keep the report reasonably compact. Do not waffle or put in material simply because you have it available. (…)

- Do not include quotations from other authors except in those cases where it undesirable to omit them. (…)

- Generally introductions are the longest section of a research report. Some authorities suggest about a third of the available space should be devoted to the introduction. Of course, adjustments have to be made according to circumstances. (…)

- A rule of thumb is to present the results of calculations to no more than two decimal places. You need to understand how to properly round to 2 decimals. (…) Basically, if the original number ends with a figure of 5 or above then we round up, otherwise we round down. So 21.455 gives 21.46 rounded whereas 21.454 gives 21.45 rounded.

- Psychological terms may not have a standard definition which would be accepted by all researchers. Consequently, you may find it necessary to define how you are using terms in your report. Always remember that definitions in psychology are rarely definitive and they are often problematic in themselves.

- Layout: Double space your work and word-process it. Leave wide margins for comments. Use underlining or bold for headings and subheadings. The underlying assumption behind this is that the report is being reviewed by another person. A report which won't be commented upon would not require double spacing.

- Check your paragraphs. Break up any very long paragraphs. Combine very short paragraphs especial1y those of just one or two sentences in length.

VII.

A. Regulations for Master's Degree Programs of the RUPP

Format guidelines of thesis and research reports:

1. Paper size A4
2. Margins: left 1.25 inches, right, top and bottom 0.8 inches
3. Page numbering must be at the bottom right of each page. Forematter must be in small Roman Numerals
4. Line spacing 1.5
5. Pages must be double sided
6. Alignment: justified
7. Tabs: 0.5 inches
8. No headers or footers to be included in the document
9. Font type: Times New Roman, or Khmer Os (Unicode) for text and Khmer Os Muol for (sub)headings in Khmer script
10. Font size for bulk of text: 11 point for Khmer Os and Khmer Os Muol, and 12 point for Times New Roman.

B. style and formatting

APA format for the Style and Formating
Spacing. Double-space all text. **Margins**. APA specifies 1-inch margins all around (top, bottom, left, right). **Pagination**. Use your word processor's header function to put page numbers in the upper-right-hand corner one inch from the right-hand edge of the page. Start with the title page and go all the way through. Figures placed at the end of the lab report are not numbered. **Manuscript Page Header**. Often used only in formal APA style (i.e., when preparing manuscripts for publication), the header consists of the first couple of main words of the title, placed in the upper-right-hand corner of the document on the same line as the page number. Like the page number, the page header appears on every page, except the figures, if any, at the end of the manuscript. **Running Header**. Also often used only in formal APA style, this is a short descriptive title that appears at the top of every page in the published journal. In a manuscript, it appears only on the title page, flush left, in uppercase letters, just below the manuscript page header and page number. It does not have to use the same words as the manuscript page header.

Headings. Headings are the titles of each of the sections of the research report. Center headings of all major sections, using upper and lower case (Abstract, Method, etc.). The heading for the introduction is the title of the paper, not the word "Introduction". Headings for subsections (subheadings) of the paper are underlined and flush
with the left margin, with text beginnning on the next line. Subheadings are used mainly in the methods section.

How To Proceed

- The hypotheses, methods and results are the easiest to write because they are the most concrete, so you may want to write these first. The introduction and discussion are often written next. The title and abstract usually come last.

- Make sure that all the sections are well integrated. Start by finding your hypotheses in the introduction and making sure that they are clearly stated. Then see whether each hypothesis is addressed, usually in the same order, in the Results and Discussion.

- Pay attention to scientific terminology. Scientific reports don't sound like essays or news stories. They are more condensed and use more precise language. For example, we cannot "prove" theories in science (we give supporting evidence or fail to find such evidence). Similarly, avoid adverbs (e.g., "really", "very", "surprisingly"); they are not quantitative and therefore add no information

- Check tables and figures (graphs) for accuracy and captions for specificity.

- Check for spelling and typographical errors. Don't rely only on spell checkers; they often miss errors (e.g.,affect/effect, its/it's).

- Proofread. Ask at least one other person to read what you have written; they will catch things that you miss.

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