UNIT 4

The Research Process

Overview

Research is a process in which people, objects, events and processes are studied to establish facts, test hypotheses, explore ideas, evaluate interventions, develop theories and advance new understandings and knowledge. The social research process includes some key elements or steps regardless of research topic. These key elements or main steps in the research process include determining the problem statement, writing the literature review and the methodology or research plan. This Unit examines and discusses these key elements while demonstrating the links among them. You will need to know the key elements comprising the research process in order to produce your own research proposal at the end of this course. When planning your research, an important aspect to bear in mind also is the role of ethical standards in research. You should begin to think about how to ensure that ethical standards are met from the moment you have decided on a problem for investigation.

Learning Objectives

By the end of this Unit you will be able to:

1. Describe the three main elements involved in designing a research project.
2. Explain the purpose of the literature review.
3. Explain the purpose of methodology.
4. Apply the research elements to a research project.
5. Discuss the importance of ethics in social research.
6. Reflect on the importance of maintaining ethical standards in social research.

This Unit is divided into four Sessions as follows:

Session 4.1: The Research Process

Session 4.2: Writing a Literature Review

Session 4.3: What is the Methodology?

Session 4.4: The Value of Ethics to Social Research

Readings & Resources

Required Readings

Cresswell, John W. (2003). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. London: Sage Publications (pp. 29-30).

Drew, C.J. (1980). *Introduction to designing and conducting research*. 2nd edition. St Louis, Missouri: CV Mosca Co.

Fang, L., Manuel, J. Bledsoe, S.E. & Bellamy, J. (2008). Finding existing knowledge. In Grinnell, R.M. & Unrau, Y.A. (Eds.), Social work research and evaluation: Foundations of evidence-based practice (p. 466). Oxford: Oxford University Press.

Hart, C. (1998). *Doing a literature review: releasing the social science research imagination*. London: Sage, p. 14. Source: The Learning Center UNSW.

Rossman, G. and S. Rallis. (2003). *Learning in the field: An introduction to qualitative research*. Sage Publications.

Sridhar, M.S. (2012). *Research methodology: Introduction to research and research methodology*. Retrieved at: http://www.slideshare.net/mssridhar/introduction-to- research-methodology-presentation

St. Bernard, G. (2003). *Survey design and analysis*. Course material. UWI Open Campus, University of the West Indies.

Sivasubramaniyan, P. (2012). Research Methodology: An Introduction. Retrieved at: www. newagepublishers.com/samplechapter/000896.pdf

The Writing Center at the University of Wisconsin - Madison. Learn how to write a literature review. Retrieved at: http://writing.wisc.edu/Handbook/ReviewofLiterature. html

You are also advised to locate and read: Additional papers relevant to the topics covered.

Session 4.1

The Research Process

Introduction

Research is a process in which people, objects, events and processes are studied to establish facts, test hypotheses, explore ideas, evaluate interventions, develop theories and advance new understandings and knowledge. While different scholars present variations of the research process, there are three main elements that remain common to all in social research. These are the 1) problem statement or statement of the problem, 2) the literature review and 3) the methodology. These three elements are the bedrock of any social research project. In Unit 3 we already discussed the problem statement and its importance to the research project. In this Unit, we will take a closer look at the other two elements: the literature review and the methodology. According to Fang et al. (2008) there is a 14-step process to social research:

Main Steps in the Social Research Process (Fang, 2008)

1. Choose a problem
2. Review the literature
3. Evaluate the literature
4. Be aware of all ethical issues
5. Be aware of all cultural issues
6. State the research question or hypothesis
7. Select the research approach
8. Determine how the variables are going to be measured
9. Select a sample
10. Select a data collection method
11. Collect and code the data
12. Analyze and interpret the data
13. Write the report
14. Disseminate the report

If we look at the 14 steps above, we will find that these can be reduced to 7 main steps. This is because steps 2 and 3 can be merged into one and called the 'Literature review'; steps 4 and 5 while they are overall considerations in the research process are not often considered main steps in the process, steps 7 to 10 can all be merged and called the 'Methodology' and finally step 14 is not common to all social research projects. Whether the report is disseminated or not would depend on the purpose for which the research was conducted. This therefore gives rise to a 7-step process in social research:

1. State the problem
2. Review the literature
3. Write research questions/hypotheses
4. Methodology
5. Collect the data
6. Analyze the data
7. Write the report

In social research, while the literature review usually follows the problem statement, it is possible that you may not yet have a clear idea of what topic or aspect of a topic you may want to research. In such a case you may start with a broad review of the literature which will then give you ideas on researchable topics or issues. From that broad review of the literature you then get a better idea of what topic or issue you would like to research and then formulate your problem statement. What, then, is the literature review and how do you go about writing it? We will discuss that in Session 4.2.

LEARNING ACTIVITY 4.1

Discuss with your peers in the Discussion Forum why it is important for the social research process to begin with a problem statement. What are the justifications for this?

Session 4.2

Writing a Literature Review

Introduction

A Literature Review aims to review the critical points of current knowledge on a particular topic. The literature review in a research study accomplishes several purposes: (1) It shares with the reader the results of other studies that are closely related to the study being reported; (2) it relates a study to the larger ongoing dialogue in the literature about a topic, filling in gaps and extending prior studies (Cooper, 1984; Marshall & Rossman, 1999); (3) it provides a framework for establishing the importance of the study as well as a benchmark for comparing the results of a study with other findings.

Figure 4.1 shows some typical questions you would ask while reviewing the body of literature about a specific topic or issue. In asking these questions you identify the various views on the topic, what has been said about it and also what has not been said. By identifying the gaps in the literature you would then have a better idea of what issues or aspects of the topic would be worthy of further research or exploration.

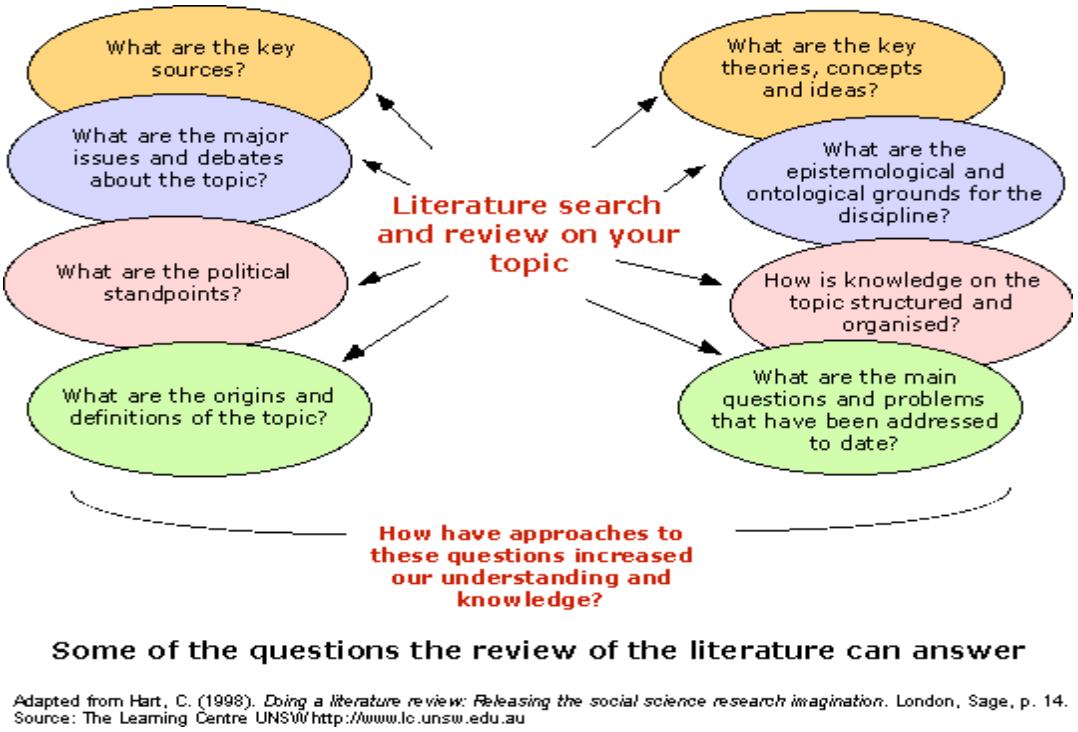

Figure 4.1: Key Questions in a Literature Review (Hart 1998)

Also, and most often associated with science-oriented literature such as a thesis, the literature review usually precedes a research proposal, methodology and results section. Its ultimate goal is to bring the reader up to date with current literature on a specific topic and forms the basis for another goal, such as the justification for the research project about to be carried out.

A good literature review is characterized by:

- A logical flow of ideas.
- Current and relevant references with consistent, appropriate referencing style.
- Proper use of terminology.
- An unbiased and comprehensive view of previous research or studies on the topic.

What is the Structure of a Literature Review?

A literature review has three parts, (1) an introduction, (2) a body and (3) a conclusion like most other writing you do at the university level.

Introduction

In the introduction you should:

- Define or identify the general topic, issue or area of concern
- Point out overall trends in what has already been published
- Establish your point of view for reviewing the literature
- Indicate the organization of the review

Body

In the body you should:

- Group research studies and other relevant literature according to a common theme.
- Summarize each item of the literature appropriately according to its significance
- Compare and evaluate each item of the literature.
- Provide topic sentences at the beginning of paragraphs and summary sentences at the end of sections to help the reader understand what the main issues are.

Conclusion

In the conclusion you should:

- Summarize the literature, maintaining the focus presented in the introduction.
- Evaluate the current "state of the art", pointing out gaps in the literature, inconsistencies and issues that are important for future study.
- Conclude by giving some insight into the relationship between your topic and a larger area of study or area of professional practice[1]

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[1]The Writing Centre, University of Wisconsin. Retrieved at:
http;//writing.wisc.edu/Handbook/Reviewofliterature.html

What Steps Must You Take in Preparing to Write a Literature Review?

As we said before, it is always best to have an idea, topic and problem statement in mind before beginning your literature review. Remember that the body of literature out there is vast and broad. By having a topic and problem statement in mind, that will help you narrow down your literature search. There are a number of steps to undertake before you write the literature review. You would need to:

- Formulate a problem statement.
- Familiarize yourself with a broad range of texts and other resources that deal with that problem.
- Decide on the texts and resources you wish to include in your review.
- Decide on the most appropriate way to classify the materials you gather.
- Identify the key issues.
- Critically analyze what you have read.
- Identify important issues that are still unresolved, or gaps in the literature.
- Think about if and how your study will contribute to filling those gaps.
- Write a draft of the literature review.

What Makes a Good Literature Review?

Mastering the art of writing a good literature review takes time and comes with continuous practice. As you read and write more literature reviews you will begin to notice a particular pattern that emerges. Here are some good tips for writing a good literature review. A good literature review:

- Clearly delimits the subject matter to be reviewed
- Covers all important relevant literature
- Is up-to-date.
- Provides an insightful analysis of the ideas and conclusions in the literature
- Points out similarities and differences, strengths and weaknesses in the literature
- Identifies gaps in the literature for future research
- Identifies the context for which the literature is important

LEARNING ACTIVITY 4.2

Go back to your research topic and problem statement. Reflect and revise based on the feedback that you received from your eTutor. Once you have done this, think about and write the main sources (books, journals, internet sources) that you can go to in search of literature on that area of research interest that you have chosen.

Session 4.3

What is Methodology?

Distinguishing between Methodology and Methods

Many people assume that methodology is the same thing as methods of data collection (the tools used to collect data) but they are not the same thing. Your methodology will inform what data collection method you choose for your research. The methodology describes and analyzes the range of methods available for carrying out research, shedding light on the advantages and limitations of each. The methodology, according to Sridhar (2012), provides the 'tools of the trade' for doing research.

It is important to have a clear understanding of the difference between research methods and methodology. Research methods may be understood as all those methods/techniques that are used for conducting research; for example, a focus group is a research method. Research methodology is a way to systematically solve the research problem. It may be understood as the science of studying how research is done scientifically (Sivasubramaniyan, 2012). The quantitative approach for example, is a research methodology.

It is necessary for you, the researcher, to know not only the research methods/techniques but also the methodology. Not only do you need to know how to apply particular research techniques but you also need to know which of these methods or techniques is relevant and which is not. You also need to understand the assumptions underlying the various techniques and you need to know the criteria by which to decide that certain techniques and procedures will be applicable to certain problems and others will not. Thus, it is necessary for you to design your methodology for your research problem as the methodology can differ from problem to problem. Being a good researcher also entails making sound decisions in designing the research project/study. The methodology and related methods are very important to design.

Methodology falls within two main approaches: the quantitative approach and the qualitative approach. After you decide on your research problem and research questions, you need to decide what approach you are going to take: the quantitative or the qualitative approach. The answer to this question will determine what methods you use in conducting your research study, as some methods are better suited to the quantitative approach (for instance a questionnaire) while others are better suited to the qualitative approach (for instance a focus group study).

To summarize what we have said above, research methodology has many dimensions and research methods do constitute a part of the research methodology. The scope of research methodology is wider than that of research methods. Why a research study has been undertaken, how the research problem has been defined, in what way and why the hypothesis has been formulated, what data have been collected and what particular method has been adopted, why a particular technique of analyzing data has been used and a host of similar other questions are usually answered when we talk of research methodology concerning a research problem or study. The methodology is a key element in your research project and determines the overall design of the research.

LEARNING ACTIVITY 4.3

Read through the following PowerPoint presentation: Research design and methods, part 1: www.uwc.ac.za/usrfiles/users/270084/Research_and_Design_I.pdf

You will see several of the concepts that you have already been introduced to, for instance statement of the problem, unit of analysis, descriptive study and so forth. Reflect on how all of these elements come together in the research project. Discuss with your peers.

Session 4.4

The Value Ethics to Social Research

The Importance of Ethical Conduct

In social research we have the researcher and those being researched or the subject/s of the research. The researcher needs to give due consideration to the subject/s involved in the research project. This is where ethics comes in. Ethics are standards for conduct based on moral principles (Rossman and Rallis, 2003). In social research there are standards for conducting the research and standards in place to protect the rights of the subject/s. It is important that, you, the researcher know what those standards are and how to apply them to your research project.

Many different disciplines, institutions, and professions have norms for behavior that suit their particular aims and goals. These norms also help members of the particular discipline to coordinate their actions or activities and to establish the public's trust of the discipline. The same applies to social research.

David B. Resnik (2011) provides some key reasons why it is important for researchers to adhere to ethical principles and standards:

- First, norms **promote the aims of research**, such as knowledge, truth, and avoidance of error. For example, prohibitions against fabricating, falsifying, or misrepresenting research data promote the truth and avoid error when doing research.
- Second, since research often involves a great deal of cooperation and coordination among many different people in different disciplines and institutions, ethical standards promote the **values that are essential to collaborative work**, such as trust, accountability, mutual respect, and fairness.
- Third, many of the ethical norms help to ensure that researchers can be held accountable **to the public and their research subjects**.
- Fourth, ethical norms in research also help to build public support for research. People are more likely to fund research projects if they can trust the quality and integrity of the research.

- Finally, many of the norms of research promote a variety of other important **moral and social values**, such as social responsibility, human rights, animal welfare, compliance with the law, and health and safety.

The two cases presented below help to show why maintaining ethical standards in research are very important to any research project.

Case 1 - Tuskegee Syphilis Study (1932-1972):
(These two cases can be put into a text box) During a research project conducted by the U.S. Public Health Service, 600 low-income
African-American males, 400 of whom were infected with syphilis, were monitored for

40 years. Free medical examinations were given; however, participants were not told about their disease. Even though a proven cure (penicillin) became available in the 1950s, the study continued until 1972 with participants being denied treatment. In some cases, when participants were diagnosed as having syphilis by other physicians, researchers intervened to prevent treatment. Many participants died of syphilis during the study. The study was stopped in 1973 by the U.S. Department of Health, Education, and Welfare only after its existence was publicized and it became a political embarrassment. In 1997, under mounting pressure, President Clinton apologized to the study participants and their families.

The Tuskegee Syphilis Study is probably the worst case of unethical human participants' research in the history of the United States and brought attention to the issue of ethics in research.

Case 2 - Nuremberg Code:

The most dramatic and well-known chapter in the history of research with human participants opened on December 9, 1946, when an American military tribunal opened criminal proceedings against 23 leading German physicians and administrators for their willing participation in war crimes and crimes against humanity. Among the charges were that German Physicians conducted medical experiments on thousands of concentration camp prisoners without their consent. Most of the participants of these experiments died or were permanently crippled as a result.

As a direct result of the trial, the Nuremberg Code was established in 1948, stating that "The voluntary consent of the human participant is absolutely essential," making it clear that participants should give consent and that the benefits of research must outweigh the risks.

Although it did not carry the force of law, the Nuremberg Code was the first international document which advocated voluntary participation and informed consent.

In summary, the Nuremberg Code includes the following guidance for researchers:

- Informed consent is essential.
- Research should be based on prior animal work.
- The risks should be justified by the anticipated benefits.
- Only qualified scientists must conduct research.
- Physical and mental suffering must be avoided.
- Research in which death or disabling injury is expected should not be conducted.

Four Main Ethical Considerations in Social Research

According to Drew (1980) ethical considerations for social research fall into four main categories: consent, harm, privacy and deception.

Consent refers to the idea that potential participants in the research project must decide whether or not they want to participate in the research (Drew 1980). This is a core requirement for any research process. As researcher, you must thus ensure that your research subjects are aware of what they are participating in and that they agree to participate in the research.

The issue of harm refers to those studies where there is the risk of the subject being physically harmed during the research process. This issue also deals with any harm that may come to the researcher as well. For example, a researcher going into a mental institution may be at risk of being physically accosted by violent patients at the institution. Harm may also be emotional or psychological. Whatever the risks, every researcher must consider and be sensitive to areas of vulnerability and ensure that the research is conducted in a manner that would negate these risks.

Every research subject has a right to his or her privacy. This therefore raises the question, how far can the researcher go in terms of intruding into the private space and life of the researched? Privacy also entails confidentiality and how public the information is to be made (Drew 1980). In this regard, the research community places high importance on the principle that data should be held in strictest confidence and that the anonymity of subjects is maintained (St. Bernard 2003).

Drew describes deception as a misrepresentation of the facts related to the purpose, nature or the consequences of a research project. He states further that it can arise as a result of either an omission or commission on the part of the researcher. Deception can also occur in a situation in which the research itself may warrant some degree of deception on the part of the researcher. For instance, the researcher may sometimes withhold some information about the study from the subject so as not to compromise the outcomes. Whether the deception is thus real or perceived, Drew warns of the risks of compromising the study due to high levels of deception.

Based on the four main categories above, here are some key ethical considerations that are important to any research project:

- Informed consent (obtaining the consent of those participating in the research).
- Respect for privacy
- Confidentiality and anonymity of data
- What is permissible to ask?
- No harm to researchers or to the subjects

- No deceit or lying in the course of research
- Consequences of publication

More information on these main areas can be obtained at: www.the-sra.org.uk or www.britsoc.org.uk/about/ethics.htm

Plagiarism

Plagiarism is an unethical practice as it relates to the reporting and publication of your research project. It is taking or using someone else's words or ideas, or, paraphrasing someone else's words and presenting them as your own without authorization or acknowledgement of the source of the information. This practice is not only highly unethical; it also undermines your own professional ability and standards. You, the researcher, need to ensure that you acknowledge all sources and ideas cited in your research project. Additional information on plagiarism can be found at:

USEFUL RESOURCES

What is Plagiarism www.youtube.com/watch?v=4P05vgxDoPU

How to Cite Sources: Citing Without Quoting
http://www.youtube.com/watch?v=n1RFLj-s1XA&feature=related

Plagiarism: Don't Do It!!!! http://www.youtube.com/watch?v=gC2ew6qLa8U

Obtaining Ethical Approval at the University of the West Indies

Research ethics committees review and oversee all research having to do with human beings. They are therefore the mechanism for enforcing research ethical standards and overseeing ongoing research. At the UWI most research studies need to be approved by ethics committee before field work begins. The Office of Research has oversight of research ethics policies and practice throughout UWI. While there is one official policy guiding all UWI research activities, the process of applying for ethical approval for any research project may differ across Faculties.

The following document is the UWI Policy and Procedure on Research Ethics (2010) and provides overall guidelines as it relates to ethical standards and the process of acquiring ethical approval prior to research. It also applied to both undergraduate and postgraduate level research. The document can be accessed at the following link: http://myspot.mona.uwi.edu/socsci/sites/default/files/socsci/uploads/policy_ and_procedures_on_research_ethics.pdf. The University of the West Indies. Policy and Procedures on Research Ethics. The School for Graduate Studies and Research, February, 2011.

UNIT SUMMARY

This unit discussed the key elements in the research project: the problem statement, literature review and the methodology while demonstrating the relationship among all three. Writing a good literature review is important as it demonstrates the context within which the research study develops and how the study contributes to the overall body of research on a particular topic or issue. In designing the research project, the researcher must understand the logic of design and have a sound knowledge of the various research tools in order to make informed decisions for his/her own project design. Finally, the unit ends with a discussion on making decisions that will ensure the ethical integrity of the study.

References

Cresswell, John W. (2003). Research Design: Qualitative, Quantitative and Mixed Methods Approaches. London: Sage Publications (pp. 29-30).

Drew, C.J. (1980). Introduction to designing and conducting research. 2nd edition. St Louis, Missouri: CV Mosca Co. Retrieved at: https://tinyurl.com/y6dx9ddz

Drew, Clifford J., and Hardman, Michael L. (1985). "Ethical Issues in Conducting Research." In *Designing and Conducting Behavioral Research*, edited by Clifford J. Drew and Michael L. Hardman, pp. 29-48. New York: Pergamon Press, 1985.

Faden, R.R., and T.L. Beauchamp. (1986). A History and Theory of Informed Consent. New York: Oxford University Press.

Fang, L., Manuel, J. Bledsoe, S.E. & Bellamy, J. (2008). Finding existing knowledge. In Grinnell, R.M. & Unrau, Y.A. (Eds.), Social work research and evaluation: Foundations of evidence-based practice (p. 466). Oxford: Oxford University Press.

Hart, C. (1998). Doing a literature review: releasing the social science research imagination. London: Sage, p. 14. Source: The Learning Center UNSW

Resnik, D. (2011). What is ethics in research and why is it important? Retrieved at: http://www.niehs.nih.gov/research/resources/bioethics/whatis/

Rossman, G and S. Rallis. (2003). Learning in the field: An introduction to qualitative research. London: Sage Publications

Sridhar, M.S. (2012). Research methodology: Introduction to research and research methodology. Retrieved at: http://www.slideshare.net/mssridhar/introduction-to-research-methodology-presentation

St. Bernard, G. (2003). Survey design and analysis. Course material. UWI Open Campus, University of the West Indies.

Sivasubramaniyan, P. (2012). *Research Methodology: An Introduction*. Retrieved at: www.newagepublishers.com/samplechapter/000896.pdf

Tuskegee Syphilis Study Ad Hoc Advisory Panel. (1973). Final Report. Washington, D.C.: U.S. Department of Health, Education, and Welfare.

Van Wyk, B. Research design and methods part 1. Retrieved at: www.uwc.ac.za/usrfiles/users/270084/Research_and_Design_I.pdf

Writing Center at the University of Wisconsin - Madison. Learn how to write a literature review. Retrieved at: httsp://writing.wisc.edu/Handbook/ReviewofLiterature.html