

# THE NATURE AND PURPOSE OF RESEARCH

Research is a **systematic** process of collecting and analyzing data for a specific purpose (this could be to validate a theory, add new knowledge, or solve a problem). It is systematic because it:

- Conceptualizes the research as a focused problem statement (this limits the problem)
- Employs a literature review (show how much insight and knowledge there is about the issue)
- Utilizes some kind of sampling procedure (this ensures that persons with an input are not excluded)
- Uses one or more data collection strategies (usually well thought out instruments which focus on issue/problem)
- Analyzes data statistically or by the chunk and code method (to ensure findings are credible in relation to the data collected)
- Discusses findings to present justification for relevant factors (show how competing claims impact on issue being researched)
- Employs reporting format which utilizes various modes for transparency of process (text, graphs, tables, appendix)

In other words the research process follows a system/procedure of conceptualizing, gathering data, analyzing data and presenting data that is coherent, logical and sequential.

## TYPES OF RESEARCH

### Archival studies

This is an examination of existing records of human activities. Researchers often examine old newspapers, medical records, birth certificates, crime reports, popular books, artwork. They may also examine statistical trends of the past such as crime rates, birth rates, and employment rates. These are particularly valuable for examining cultural or historical trends.

### Case Studies

Sometimes researchers interview, test, observe and investigate the backgrounds of specific individuals in detail whenever there is the belief that an in-depth look at one individual will reveal something important about people in general. These take a long time to be completed and the results may be limited by the fact that the subject is atypical.

### **Surveys: method of collecting/gathering information from a sample of individuals**

In contrast with in-depth study of one person, surveys describe a specific population or group of people. This involves asking people a series of questions about their behaviours, thoughts or opinions. Surveys can be conducted in person face to face, over the phone or through the mail. Rather than questioning every person in the population, survey researchers choose a representative sample of people and generalize the findings to the larger population. Surveys need to be carefully designed and conducted to ensure their accuracy. The results can be influenced and biased by two factors: who the respondents are and how the questions are asked. Sample must be representative of the population on key characteristics such as sex, race, age region and cultural background

### **Naturalistic Observation**

The researcher observes people as they behave in the real world. The researcher simply records what occurs and does not intervene in the situation. This tends to be used in anthropology and psychology.

### **Co relational studies**

These are designed to find statistical connections or correlations between variables so that some factor can be used to predict others. A correlation is a statistical measure of the extent to which variables are associated. A positive correlation exists when two variables increase or decrease together. A negative correlation exists when increases in one variable are accompanied by decreases in the other or vice versa

## THE CHARACTERISTICS OF RESEARCH:

1. **Objectivity:** This refers to both procedure and characteristic and refers to the quality of the data produced based on collection and analysis procedures. To the layman objectivity means unbiased, open minded, not subjective. (Objectives should be clear, determine relevance, provide a link to the research problem, and establish sources of information on the research problem)
2. **Precision:** Your research should make use of technical and precise language (validity, reliability, research design, random sample etc.); describes study accurately so that replication or extension may be done and the results used correctly.
3. **Verification:** By this the results obtained maybe be confirmed or revised in subsequent research.
4. **Parsimonious explanation:** Do not make your explanations long and drawn out; reduce complex realities to simple explanations by using Ocham's Razor.
5. **Empiricism:** Your research should be guided by evidence obtained from systematic research rather than opinions.
6. **Logical reasoning:** Employ your thinking process whether from general to specific (deductive) or specific to general (inductive).
7. **Conditional conclusions:** (implicit or explicit) Bear in mind that conclusions in research are not absolute hence use of terms such as "tend to indicate", "are suggestive".

## THE RESEARCH PROCESS

**SELECT A GENERAL THEME:** This defines the area in which your research will be conducted. CXC identifies the following themes from which research is to be carried out: the Environment, the Mass Media, Gender Issues in the Caribbean, The productive Sector & Development, Health, Crime in the Caribbean, Sports, The Workplace, The Languages of the Caribbean, Religion and Literary, Performing and Visual Arts.

**REVIEW LITERATURE** on the selected theme. The Literature review is important as it

- *provides more/background information* on the topic
- *highlights areas of disagreement agreement* from previous research
- *highlights the developments in the research* area

- *locates gaps in the research process* in relation to the topic
- *provides information on how different aspects of the research* may be undertaken
- maybe used to *establish the context and background* for the study.

In essence the Literature Review informs about *prior research methods used* and can be used for *critique* as well as to *identify commonalities*. Your Literature review can be *Exhaustive* (done over a long period of time; during data collection) or *preliminary* (done before data collection and then expanded as data are collected). The articles used for your review need to be credible – should have author's name and credentials; sources should be credible (published on a regular basis, peer reviewed, have references/bibliography) Sources may include **internet, existing literature, newspaper reports, archives, minutes of meetings, oral histories, Hansard reports, Cabinet minutes, previous studies, journals/magazines.**

### **CRITERIA FOR EVALUATING WEB SITES**

It is important to evaluate the sources from which information is obtained for research purposes, however it is even more crucial to evaluate information obtained from the internet since there is no quality control measures on the internet. One should look for **authorship (expertise), timeliness, structure and content (relevance)**

**Authorship:** One needs to ascertain if the source of the information is **reputable and reliable**. To do so check for the individual/group which authored the site, their qualification or expertise and if there is any way that contact can be made (contact number, email address etc), Has it been reviewed by an editorial board? Is it written for an academic audience or general public? Is it peer reviewed?

**Timeliness:** one needs to establish if the information is 'stale' or poorly maintained. Check the date when the site first appeared on the web, when was it last updated and how regularly is it updated, how current is the information?

**Structure:** See if much thought time and effort was put into the site. Assess if it is logically organized, is the layout of text and graphics visually pleasing? Does the text follow grammar, spelling and composition rules? Is evidence or examples provided to support points or arguments?

**Content:** Ensure that the information is well-balanced and of a good quality. Look for biases, comprehension, comparison with other sources, do links work, are there references to the information? Are there generalizations?

### **DECIDE SPECIFIC RESEARCH PROBLEM/QUESTION/HYPOTHESIS**

In identifying your research problem one must bear in mind the following criteria such as

**Availability of information :** Is this problem researchable?

**Clarity:** Is the problem clearly stated for all to understand?

**Feasibility:** Is the problem manageable and can be completed on time?

**Ethical:** Will it bring harm or infringe on persons' rights?

**Empirically based:** Can data be collected on the problem?

**Relevance:** Is it based on a development issue in the region such as crime, pollution?

If the answers to these questions are positive then its time to write a statement of the problem.

**DETERMINE THE DESIGN AND METHODOLOGY:** The design you choose will determine the method of data collection, sampling as well as the data presentation. This can be either a *quantitative* or *qualitative* (see "Fork in the Road"). In addition you need to decide the population from which data will be collected (*target/representative sample*), how the subjects (*sample*) are selected (*non- probability/probability*) and how data will be collected (*in-depth/structured interview, archival research, oral histories, minutes of meetings, observation ( naturalistic or /participant), survey( structured or unstructured interview)*).

**COLLECT DATA:** During data collection the researcher needs to be cognizant of the ethical and legal concerns regarding collection and analysis. The researcher needs to resolve the issues concerning privacy of subjects and data, confidentiality, consent (subject & parents) and transparency.

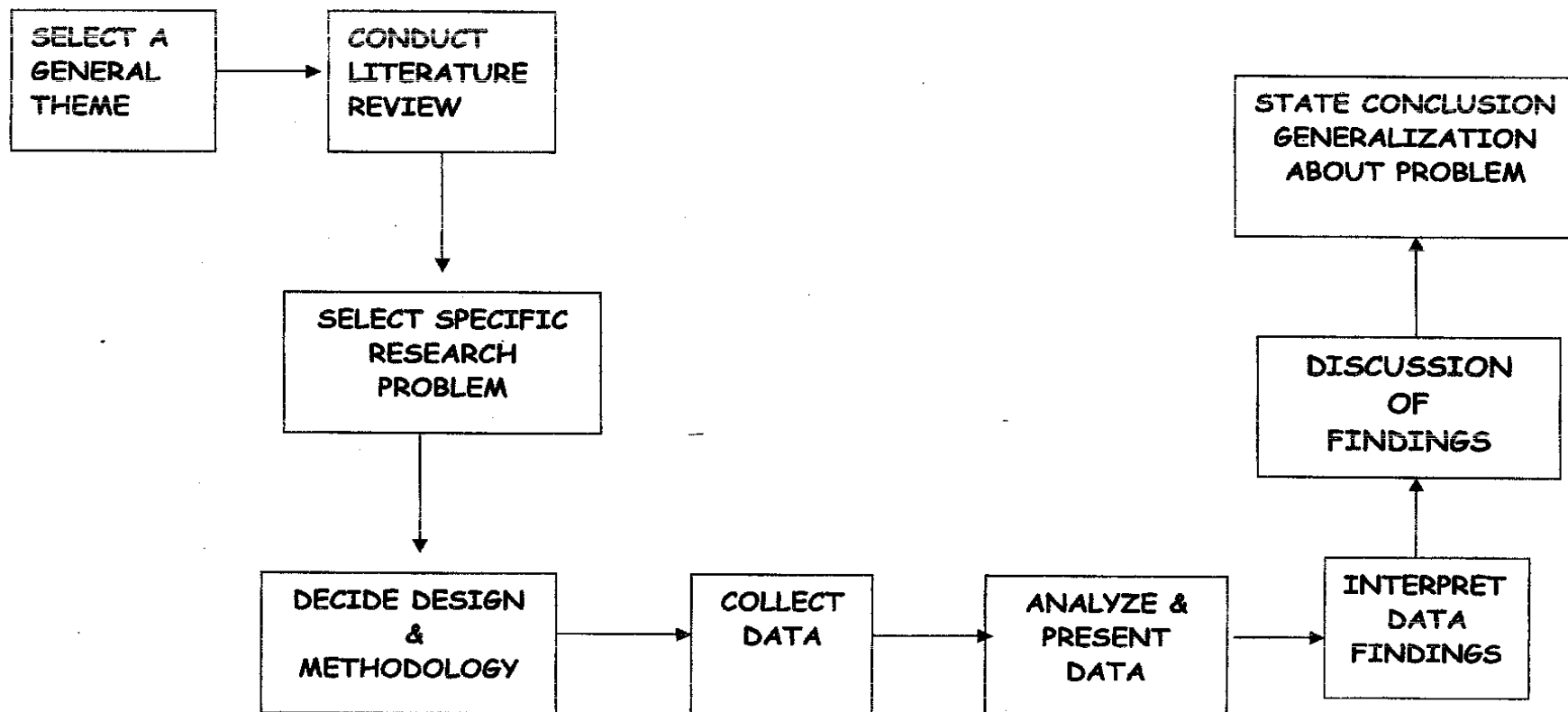
**ANALYZE AND PRESENT DATA:** The analysis of the data will be determined by the design (*qualitative/quantitative*). If your design is a qualitative one then the *chunk and code* treatment of data will be used and the presentation will be mainly textual. Here the researcher uses a code to identify data. If a quantitative approach is employed then data is treated *statistically* and visual presentations used (*tables, graphs/charts, text*)

**INTERPRET FINDINGS:** In this section the researcher attempts to provide *suggestions* as to why the data is that way. What are the possible reasons for the responses received? What trends can be picked up from the responses? What meaning can be deduced from the responses/data?

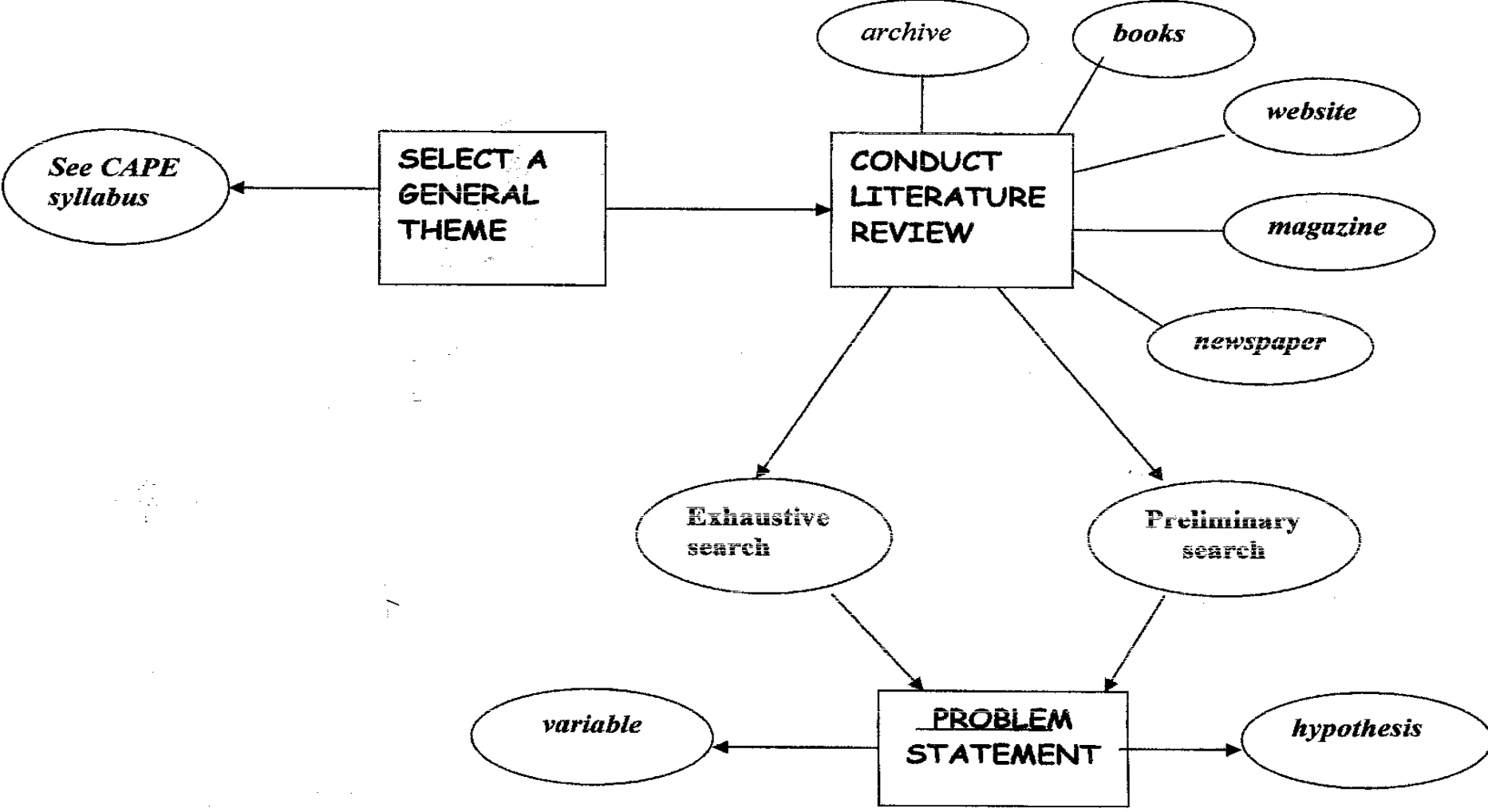
**DISCUSSION:** This is where the research 'takes off' with the literature reviews and the data findings balancing each other. The discussion involves making *connections*/sense out of the literature review and the data findings. Are there any commonalities, conformation, differences?

**STATE GENERALIZATIONS/CONCLUSIONS:** What did your data project or show in relation to your hypothesis? Can these findings be generalized to the target population? Here you *summarize the findings*. What were the *limitations (time, word limit, slow response of sample population)* experienced? Were there any *new discovery/findings*? What *recommendations* can you make? (*more research; qualitative/quantitative*) .

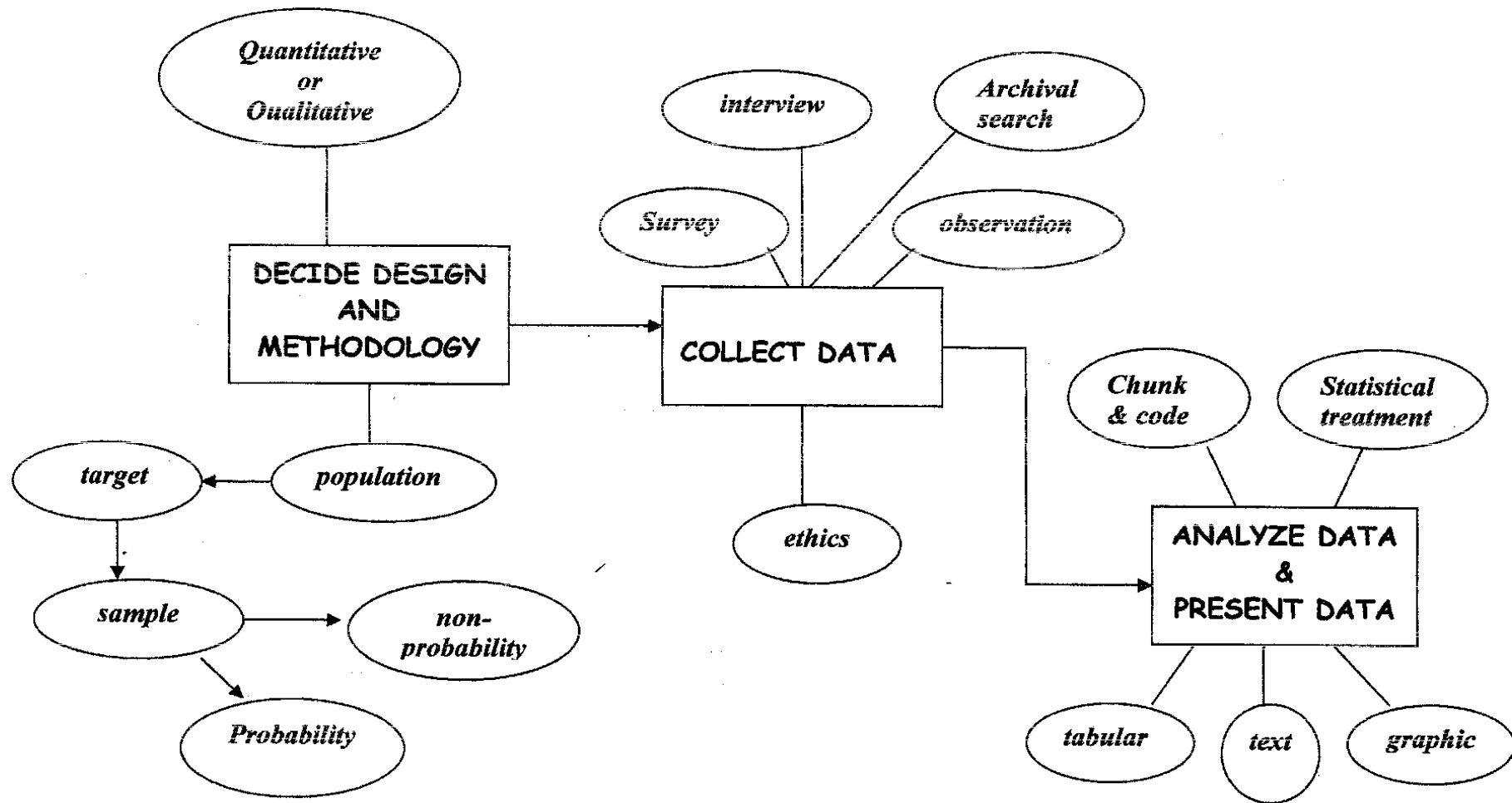
### THE RESEARCH PROCESS I



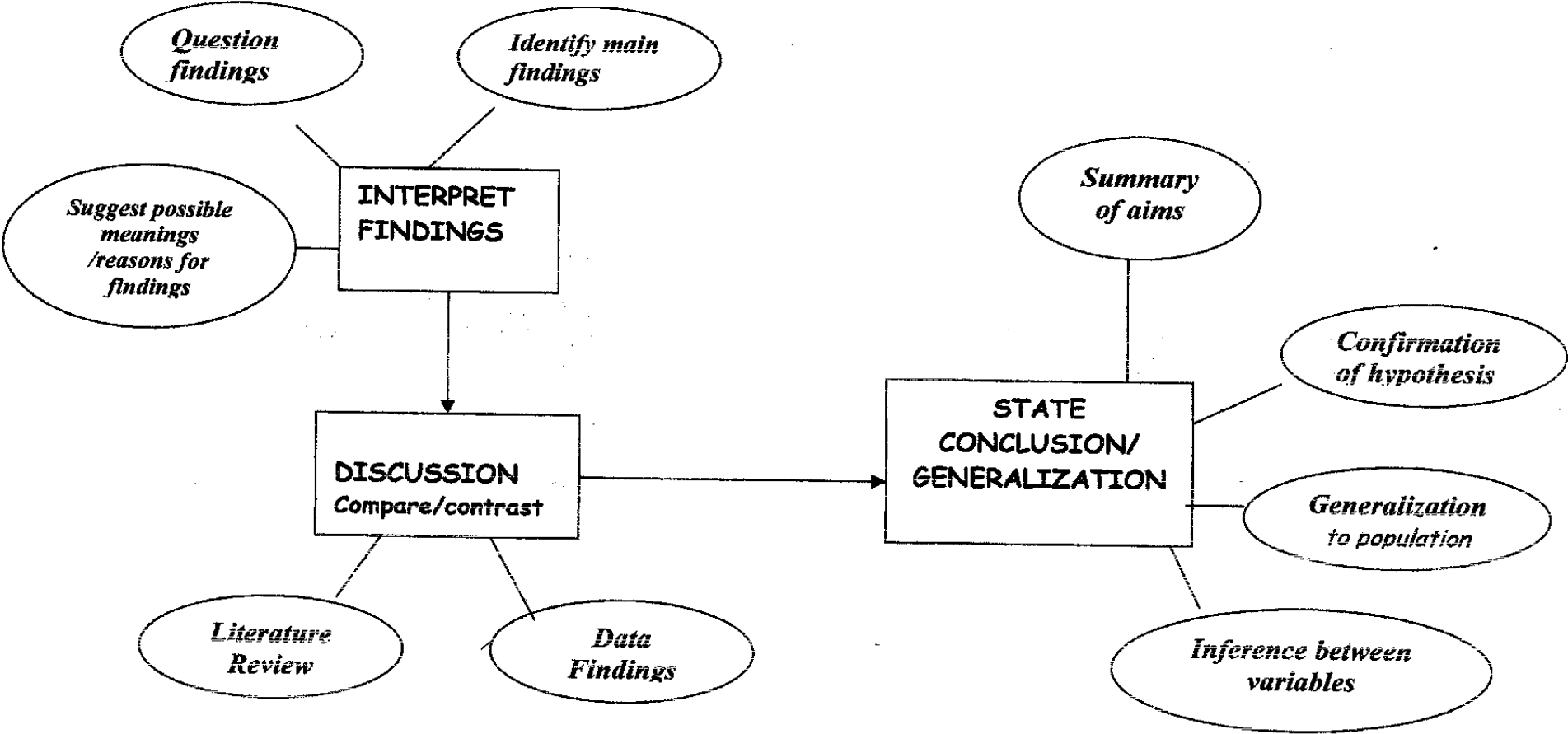
**THE RESEARCH PPROCESS II**



### THE RESEARCH PROCESS III



**THE RESEARCH PROCESS IV**



## THE "FORK" IN THE ROAD

### Quantitative Research

- Uses numbers to express important findings
- Treats numeric data with statistics
- Applies pre-established design
- Data comes from questionnaires (forced choice responses), experiments, and observations
- Accepts single or fixed reality
- Applies deductive logic
- Uses analytical thinking
- Applies mechanic approach
- Emphasizes rationality
- Usually has a hypothesis
- Tends to use large sample
- Selects sample randomly
- Researcher is detached
- Trusts clinical instruments
- Tends to have context free generalizations

### Qualitative Research

- Uses words to express important findings
- Treats narrative data with chunk and code
- Applies emergent design
- Data comes from interviews (open-ended questions), artifacts (including documents) and observations
- Accepts multiple realities
- Applies inductive logic
- Uses synthetic thinking
- Applies humanistic approach
- Emphasizes rationality and intuition
- Usually has foreshadowed problems
- Tends to use small sample
- Selects sample purposefully
- Researcher is immersed
- Trusts professional judgment
- Tends to have context bound generalizations

## SAMPLE SELECTION

A **sample** is a part of a larger population (target) and is usually selected to be representative of the target population. **Sampling** is the **procedure** used to select the sample population under study to represent the entire population. Selecting a **sample saves time and money** for the researcher as often times it is not possible to survey the entire target population. The **data collected can then be generalized** to the target population. Sampling can be of the **probability** or **non-probability** type

**PROBABILITY:** Sampling where subjects are drawn from a population in known probabilities. In this case all members of the target population have an **equal chance** of being selected in the sample Examples of probability sampling include:

- **Random:** This is a process of selecting a sample in such a way that all individuals have a fair chance of being selected (**pulling names from a hat**)
- **Systematic:** One of the simplest ways to select from a large population. Here every person has an equal chance of being in the research. Subjects are selected by a determined number pattern, like every 10<sup>th</sup> name on the list/ every third house on street
- **Stratified random sampling:** This involves the division of the sampling population into groups to ensure that the sample is representative of the group. This will allow researcher to control the variable

**NON-PROBABILITY:** Here the researcher uses subjects who happen to be accessible/who may represent certain types of characteristics or are information-rich. In this case sampling is by choice of the researcher

- **Convenience sampling:** using subjects that are accessible or convenient such as students in your class, members of church youth group. The drawback is that there is no precise way of generalizing from the sample to any type of population and secondly there may be biases.
- **Purposeful (purposive, judgemental)** this is where researcher uses particular members from the target population
- **Quota sampling** allows researcher to control variables without having a sample frame. Predetermined how many respondents with particular characteristics are to be questioned. This is ideal when the study is based on a simple comparison of two groups. This is not truly random and so results maybe distorted
- **Multistage sampling** involves selecting a sample from another sample
- **Snowballing** involves using personal contacts to build up a sample of the group

# QUESTIONNAIRES AND INTERVIEWS

## QUESTIONNAIRES

By definition, a questionnaire is a list of preset questions for respondents to complete themselves. These questions may be of the open-ended type or the closed/pre coded type. The questionnaires can be used in a variety of ways depending on *who controls the situation* and the *level of interaction* between the researcher and the respondent.

- a group setting in the presence of the researcher - useful if there is a captive audience as there can be a high response rate and the researcher gets the opportunity to explain questions ( like in a school)
- self completion without researcher: - time and cost are of essence in this type of setting as the researcher may receive a large number of responses in a short time but responses are likely to be lower and moreover you can't ensure that informant answered all questions ( community)
- Face to face unstructured interview provides the opportunity to use more open-ended questions but this takes time.
- Telephone: interview can be done in the evenings, not possible to give/show cards but not every one has a telephone thus creating bias in favour of the advantaged in society.
- Questionnaire is a practical way to collect data. The advantages are varied and include completion within a short period of time; little personal involvement; the ease in quantifying data; more objective and scientific analysis; and above all it is more reliable than qualitative and covers a larger sample size.

## INTERVIEWS

**Structured:** simply a questionnaire administered by an interviewer who reads the questions to the respondent **Unstructured:** the interviewer has no predetermined questions, allowing the conversation to develop naturally. The researcher needs to be nondirective (do not offer opinions) and must avoid approval/disapproval during the interview.

## WRITING A RESEARCH PROPOSAL

A research proposal is a paper/plan describing what the researcher intends to accomplish and the best way to do so. It should demonstrate an understanding of the entire research process. This plan serves as a guide for how you conduct your study.

**Background:** This section explains the context in which the problem to be researched is discussed. Your aim is to provide arguments to support the need for the study and establish the need for further research.

**Identifying the problem and stating the research question:** This is where you indicate what your hypothesis is or what question/questions you are setting out to seek an answer to. This is also a good point at which to define terms you will use. Defining your terms is especially important where they have specialist meanings that differ from general usage.

**Purpose of the study:** You will need to state clearly what you intend to achieve in this study. Remember that research is carried out for reasons that include **clarification** of the cause of a phenomenon you have observed; **gathering information** to inform decision making or a **problem solving** process or to aid in the **development of a theory** that explains some phenomenon you have observed.

**Significance of the study:** Being aware of previously conducted investigations will help you derive significance from the findings of your research. It is important to know how your findings will contribute to existing knowledge or practice.

**Review of Literature:** In this section, you will include any information you have found in your reading on the subject that supports your hypothesis. Sources of relevant information often include journal articles, reports from government and international organizations. Reading any of these will help you to identify important concepts that may arise from time to time during your research.

**Design of the study:** Looking at other studies that have been done in your area of interest can help you in designing your study as well as support your choice of methodology. Your research question will determine the kind of information you need and the type of investigation and sources of data you will choose. In describing your study design you will indicate whether you are doing a case study, action research, a survey etc.

**Participants and location:** Participants are often referred to as the subjects or the sample population/group. In this section you will indicate who will be investigated in your study and the location where the study will take place. Say how participants will be selected and describe the kind of setting in which you will make your observations or conduct your interviews (if these are relevant)

**Data collection sources:** In this section you will specify all the sources (primary and secondary) from which you obtained data. You should describe the sources i.e. primary source ( people surveyed or interviewed) by giving demographics such as age, sex, education level, socio-economic status, occupation etc. For the secondary sources, indicate whether it is book, newspaper, journals, magazine, internet. For each indicate the title of the article/book, the author and the credential of the author.

**Timetable and costs:** Include a time line for completing the project and an itemized estimate cost. Make your timetable realistic and stick to it. Meeting with your teacher should be structured around this

**Analysis of data:** Once you have collected all this data, how do you analyze it? How will you make sense out of the evidences you collect? How you interpret that data will determine how you answer your research questions. You should indicate what comparisons you intend to examine.

# ETHICAL ISSUES IN RESEARCH

## PLAGIARISM AND THE RESEARCH PAPER

Plagiarism, according to Webster's II new College Dictionary (1995), is the 'stealing and use of the ideas or writings of another as your own'. Using another person's words or ideas without acknowledging your debt to them is a form of cheating. Examples of plagiarism include: handing in someone else's work as your own, using the exact wording of another writer without using quotations and proper citation or using another writer's ideas without properly citing the source.

Citation is important because it

- gives others a chance to learn from the resources you used
- it shows you stand by your work as you are willing to let others verify it
- gives credit where credit is due
- makes your original ideas stand out

There is no need to give citations for ideas/facts which are common knowledge, for proverbs or well known quotes or for your own ideas or opinions or any study you conducted. You however need to give citation for ideas/observations which are unusual/unique and not your own or for results or studies you did not conduct yourself.

The way you give a citation will depend on the style stipulated. For Caribbean Studies the style is the APA (American Psychological Association). In text citation or parenthetical reference follows a quotation or paraphrase you use in the text of your writing. The information you give in parenthesis will lead others to the complete citation found in the bibliography/reference. The three pieces of information given in text are the author's name, year of publication and page number.

## **ETHICS**

Researchers often do encounter ethical problems or dilemmas when conducting research. This is so because people are involved in the data collection process. By virtue of the fact that people are involved, means that the researcher has to be careful in treating them **fairly and with respect**. In addition as the data is collected, the researcher may be required to make judgements which may have **moral implications** for the sample/target population, and so his ethics are called into play. Harm to the sample/target population must be avoided because if this occurs

then the research will be deemed **compromised/flawed/unreliable** and will therefore not be acceptable. With this in mind then the following questions should be of concern for the researchers:

1. What harm, if any, is the research likely to bring participants?
2. Does knowledge gained justify risks involved?
3. Is the privacy of subjects being invaded?
4. Should privacy be maintained under all circumstances?
5. Do subjects have a right to be informed that they are being studied?
6. Is their consent necessary?
7. Does it matter how the research results will or can be applied?
8. Should this affect the research design or the way the research is reported?
9. When, if at all, is deception in conducting research or in reporting the research results justified?

**The American Sociological Association recommends that the researcher:**

- tells prospective subjects what they will experience so they can give **informed consent** to participate
- **instructs subjects** that they may withdraw from the study at anytime
- **minimizes all harm** and discomfort to the respondents
- keeps the subjects' responses and behaviour **confidential**
- **debriefs subjects** who were deceived in some way by fully explaining the research after they have participated.
- maintains **integrity and transparency** of the research process.

It therefore means that when the researcher is **presenting/reporting** his findings the following should be borne in mind:

- The **anonymity** of the respondent (s) is maintained to protect their wishes, interests and well being.
- **Confidential** material should not be included or if it is there should be no way that readers are able to connect the data with the respondents.
- The purpose of social research is to help, not harm the respondents and therefore every effort should be made to **prevent harm**.

- Personal wishes and biases should be eliminated from your research.
- Research should be authentic, not fabricated and so there should be no **tampering of data**.
- Very few researches consist of primary data only. The researcher therefore needs to acknowledge the sources from which secondary data are obtained. Failure to do so constitutes **plagiarism**.

## THE BIBLIOGRAPHY, REFERENCE AND APPENDIX

**Bibliography** refers to the list of material read but was not necessarily used in the study whereas **Reference** refers to the list of material actually used in the study. These are to be presented in **alphabetical** order. Bibliography/Reference must be given so that:

- Charges of plagiarism (literary and intellectual theft) are not brought against the researcher.
- Those assessing your work can distinguish what is yours and what you have taken from elsewhere.
- Other readers/future research students can follow up your sources.

Caribbean Studies uses the APA System of bibliography as follows

- Double spacing between entries
- Single spacing within an entry if more than one line
- Do not indent the first line in each citation, but indent all the following lines (hanging indent)
- Use initials for first and middle names
- Capitalize only the first word of the title and subtitle and any proper nouns, do not underline or use quotation marks
- Italicize journal name, volume number or book title
- Include month and year for monthly magazines; include date for weekly magazines
- p.(page) and pp.(pages) are included only in newspaper articles, book chapters and journals that do not use volume numbers
- Months are spelt out rather than abbreviated
- Do not end citation with a period if it ends in a URL
- Space once after commas, colons, semicolons, punctuation marks at the end of sentences, periods that separate parts of a reference citation, and after the periods of the initials in personal names

### Books

Author(s). (year). Book title (edition if given). Where published: publisher .

Author(s). (year). Book title. Where published: publisher .

### **Articles**

Author(s). (year). Article title. Name of journal, volume, pages.

Author(s). (year). Article title. Name of journal, volume (issue) , pages.

### **Newspaper**

Author(s). (date). Article title. Name of Newspaper, section, page

### **Electronic Sources**

Author(s). (last revised or dated year, month day). Title. Magazine Title, volume if given, pages or start page and /or indicator of length.

Retrieved month date, year, from protocol: //site/path/file.

## **THE APPENDIX**

This contains material the researcher considers to be of importance to the research carried out, but was unable to be put in the body of the research paper. It may include

- copy of the questionnaire used
- transcripts of interviews conducted
- data which would be cumbersome within the data presentation
- statistical table/chunk and code script
- additional pictures/ maps etc

Each item in the Appendix is to be labeled individually - **APPENDIX A, B, C**, etc

### **Further Reading**