EDUCATIONAL RESEARCH

Concept of Research

The word research is composed of two syllables "Re" and "Search". "Re" is the prefix meaning 'Again or over again or a new' and "Search" is the latter meaning 'to examine closely and carefully' or 'to test and try'. Together they form, a careful, systematic, study and investigation in some field of knowledge undertaken to establish principles/policies.

Research is a systematic investigation of problem in order to get its solution. In other words it is science of seeking, collecting, organizing, analyzing and interpreting data. Scientific research is systematic, controlled, empirical and critical investigation of hypothetical propositions about presumed relations among observed phenomena.

Key terms in the definitions of research
Empirical - based on observations and experimentation on theories.
Systematic - follows orderly and sequential procedure.
Controlled - all variables except those that are tested upon are kept constant.
Critical **-** process of investigation must be full proof and free from drawbacks.
Organized - planned procedure, not a natural one.
Employs hypothesis - guides the investigation process.

Research as a scientific process

Research is a scientific process for the following reasons:

- It has specific procedure
- It is reliable and universal
- It uses rational approach for development of theory
- It uses systematic and accurate investigation
- It can be replicated. This refers to instead that the procedures employed in the study are reported that researcher could repeat the study.
- It helps to drive the truth behind the phenomena.

Characteristics of research

Research has certain characteristics. Some of these are:

- It is directed to solve specific problem
- It is based on empirical evidence with carefully designed study.
- It requires accurate handling of the problem
- It involves collecting new information for a new purpose
- It requires expertise
- The information obtained must be carefully recorded and reported

Importance of research

Research is very important because there is need to find corrective measures to solve the problem. The following are some importance of research:

- It helps to generate new knowledge
- It seeks and finds solution to problem
- It helps to improve products and process of learning
- It helps to improve classroom practice

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- It helps to improve teaching methodologies.

Types of research

Types of research can be classified into several categories according to the nature and purpose of the study and other attributes. Following are some types:

1. Basic research
2. Applied research
3. Descriptive research
4. Analytical research
5. Conceptual research
6. Empirical research

Basic research is a type of research which is used to find the truth or generating new knowledge. This type is also called "pure" or "fundamental" research. It is interested in deriving or increasing knowledge. Basic research is usually conducted in laboratory under controlled situation.

Characteristics of basic research

- It is used to get the truth or knowledge.
- It attempts to describe the status of things.
- It does not provide results for immediate practical use.
- It is aims at making certain conclusion facing a concrete problem.
- It is directed towards finding information.
- It adds value to already existing body of knowledge.
- Its end is only the formulation of theories.

Applied research is a type of research which seeks to solve a specific problem or provide new solutions to issues affecting an individual, group or society. It is also called contractual research because it involves the practical application of scientific methods to everyday problems.

Characteristics of applied research

- It highlights generalizations and hypotheses that inform research findings.
- It is conducted to solve particular problem.
- It relies on empirical evidence.
- It is set at providing solutions to a defined problem.
- It requires accurate observation and description.
- It involves the use of scientific methods to everyday problems.

Differences between Basic and Applied research

	Basic research	**Applied research**
(i)	It is conducted in laboratories or restricted environment	It can be conducted any where
(ii)	It involves development of the theories	It involves testing of the theories in actual problem situation
(iii)	It uses animals as a study	It uses human being as a study

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	sample	sample
(iv)	It has no immediate or planned application	It is undertaken to solve an immediate practical problem
(v)	It is for generating or adding knowledge	It is used for solving societal immediate problem

Action research

Action research is the types of applied research undertaken to solve local and practical problems using scientific methods.

Steps in Action research

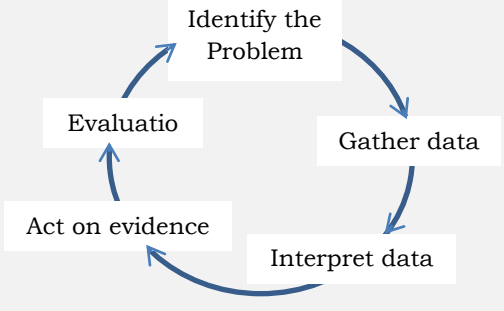
- Identification of the problem
  Researcher often has several questions he wishes to investigate. It is important to limit the questions to one that is meaningful.
- Data gathering
  The collection of data is an important step in deciding what action needs to be taken.
- Interpretation of data
  Analyze and identify major themes is very important step in action research.
- Act an evidence
  Using the information from the data design the plan of notion.
- Evaluate results
  Assess the effects of the intervention to determine if the improvement has occurred.

Types of Action research

(1) Cyclic action research: involves cyclical method of planning, taking action and reflection

(2) Spiral action research: involves spiral method of planning, implementing plan, reflection and replant.

Cyclic Action Research



Characteristics of Action research

- Collaborative and participatory with stakeholders, i.e. Students, teachers, parents, administrators and community.
- Undertaken directly in situation (conducted in local settings).
- Enabling practical problem solving
- Seek to deliver usable and sharable outcomes.

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- Focuses on immediate and practical problem
- Use information from the data and design the plan of action

The purposes of action research

- Solves classroom problem through the action of scientific method.
- Provides opportunities for teachers to evaluate themselves.
- Influences thinking skills and attitudes towards process of change in the school community.
- Increases sharing and collaboration across disciplines and schools.
- Helps teachers to learn about themselves, their students and can determine ways to improve.
- Improves communication those involve in action research
- Contributes to the theory and knowledge base to enhance practice.

Descriptive research is a type of research that describes the characteristics of the population or phenomenon studied. It aimed at finding facts and tries to describe and identify how things are or happening at present and there is very minimum control of data gathering and collecting. It is also known as an observational research because none of the research study variables are influenced in any capacity.

Characteristics of descriptive research

- It is a quantitative research method.
- Researcher records what he observe or happening by using specific tools.
- It is a cross-sectional study where different sections belonging to the same group are studied.
- It is the basis for further research.
- Normally survey method is used to describe phenomenon.
- Its data can be used for the next research.

Analytical research is a type of research that involves critical thinking skills and the evaluation of facts and information relative to the research being conducted. From analytical research, a person finds out critical details to add new ideas to the material being produced.

Characteristics of analytical research

- It uses facts or information to make critical evaluation.
- It analyses why groups have such characteristics.
- It focuses on finding reasons and causes of certain things.
- It assumes an hypothesis of the research.
- It requires comparisons between groups or over time.
- It tries to maximize power to detect differences, if they exist

Conceptual research is a type of research focuses on the concept or theory that explains or describes the phenomenon being studied. It aims at modify, develop, clarify and interpret concept.

Characteristics of conceptual research

- It doesn't involve conducting any practical experiments.

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- It is related to abstract concepts or ideas.
- It needs to know that some concepts are not clear to lead problem.
- It uses expanded/changed concept to make subject matter comprehensible.
- The product is conceptual model.

Empirical research is a type of research which is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief. Its great emphasis is on the kind of data/facts that can be verified by experience or direct observation.

Characteristics of empirical research

- It has specific research questions to be answered.
- It relies on actual observation.
- It studies the definition of the population, behaviour, or phenomena.
- Description of the process is used to study this population or phenomena
- It emphasises on kind of data or facts that can be verified by experience.

Research Approaches

Research approaches are plans and procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. There are two main types of research approaches; **qualitative** research approach and **quantitative** research approach.

Qualitative research is descriptive in nature, because it generally deals with non-numerical and unquantifiable things. A biologist studying symbiotic relationships in nature, for example, use qualitative research, because the scientist would more often than not be describing behaviours of animals. There might some numerical data in that the researcher would document the number of observations; however, the observations themselves would be descriptive of what the animals do.

Characteristics of qualitative research approach

- It is descriptive and uses words instead of numbers.
- It analyses the response from field and leave open the possibility of changes that deal the direction of researcher.
- Researcher is primary instrument for data collection.
- It is flexible, responsive to changing conditions.
- Its sample usually is small and nonrandom or purposively selected.

Quantitative research is a research approach is much more numbers-driven. The emphasis is on the collection of numerical data. The conclusion then makes inferences based on that data. A biologist studying population numbers would use quantitative research.

Characteristics of quantitative research approach

- It is associated with deductive reasoning from general principles to specific situation.
- It uses more scientific methods of investigation.
- The results are based on larger sample sizes that represent population.
- Researcher has a clearly defined research question to which objective answers are required.

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- Data are in the form of numbers and statistics, often arranged in tables, charts, figures, or other non-textual forms.
- Researcher uses tools, such as questionnaires or computer software, to collect numerical data.

The differences between Qualitative and Quantitative research approaches

	Qualitative	Quantitative
i)	It is mostly inductive inquiry approach	It is mostly deductive inquiry approach
ii)	It studies social phenomenon	It studies relationship, effects and cause
iii)	It is universal inquiry	It is focused and individual variable inquiry
iv)	It uses words for narrative descriptions	It uses number for statistical analysis
v)	Researcher is an observer	Researcher is a participant

Problems encountered in doing research

- Lack of funding… research is expensive and requires a lot of money.
- Lack of knowledge and skills… to conduct successful research needs expert knowledge and skills about research.
- Language barrier… it is common problem in data collection especially when using the interview and questionnaire methods
- Dishonest… some people who give misleading responses during research.
- Uncooperative respondents… some respondents may not be willing to give required information
- Poor coordination among research institutes and private sectors.
- Shortage of library services

Educational research

Educational research is the systematic application of scientific method for solving educational problem. It is the process of finding solution to educational problems through the collection of empirical data that is analyzed and interpreted.

Aims of Educational research

Educational research has the following aims:

- Helps teachers and other educators to improve the process of teaching and learning by helping test theoretical concepts in actual problem situation.
- Helps teacher to develop or generate new knowledge.
- Can be used to find factors which motivate learning in classroom situation.
- Finds solution of educational problems in the society.
- Helps to provide baseline data that can be used for planning process.
- Helps to understand the educational issues taking place in the country and forming educational decisions.

Purposes of carrying out educational research

- To identify the needs of society so as to develop a relevant curriculum.
- To assess the implementation of educational programmes.
- To establish the needs of educational institutions.
- To trace and document educational development in the country.
- To generate new knowledge to improve the existing body of knowledge.

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Terms used in educational research

- **Variable**

A variable is any characteristic that shows variation or differentiation in term id sex, age, weight, height, and intellectual ability. There are two types of variables:

(i) Independent variable
(ii) Dependent variable

- **Independent variable** is variable which researcher manipulates in order to determine its effects on another variable.

- **Dependent variable** is observed to determine the effects of manipulating the independent variable.

- **Population**

Population refers to the whole group of people, animals or things that is to be studied.

- **Sample**

Sample is a number of people or things taken from a group and used to provide information about the large group. A sample must be representative, that is, typical of the group.

RESEARCH PROCEDURES

Generally, research involves the following steps:

(1) Problem identification
(2) Literature review
(3) Hypothesis formation
(4) Select research design
(5) Data collection
(6) Data analysis and interpretation
(7) Report writing

Research problem

Research problem is a question or idea of interest to researcher which ought to be answered through data collection. In other words, it is any issue or concern that has difficult and need to be investigated. It is important to plan before person goes on a research. Researcher needs to draw up a list of problems that one is interested in or that need to be investigated. In order to formulate a problem, two basic steps are undertaken:

(1) A researcher will first decide on the general problem area. For example, in politics, religion, culture, education, etc. Then research will decide general problem as in education. "Factors influence students' performance in schools"
(2) Narrow down the general problem into a specific one. This helps to to understand few variables which researcher can easily handle. For example, "Negative factors influence students' performance in advanced schools".

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Characteristics of a good research problem

A good research problem has the following characteristics:

- It should be researchable or verified. The problem must be investigated through the data collection and analysis.
- It must have theoretical or practical significance. This means it should contribute to the improvement of educational process.
- It must be interested to the researcher.
- It should be ethical, that is, it should not involve physical emotions or psychological damage to the people being investigated.
- It should be original new, which means it should not investigated earlier.
- Availability and accessibility of resources necessary to carry out the research.

Importance of research problem

- Helps to understand the research procedures in better manner
- Helps to identify each and every step of research process
- Classifies main objectives of the study.
- Helps to know the relevant area of the study
- Helps to know limitation of the study.

Sources of research problem

There are many sources from which research problems are derived. These include:

(i) ***Personal experiences:*** everybody has in one way or another been exposed to some interesting or challenging situation in school or outside school. This could be lateness, poor performance, etc.

(ii) ***Deduction from theories:*** there are many theories whose applicability to specific educational problems in not known until test. So you can structure your problem from the theory.

(iii) ***Literature review:*** by reading various studies done by other researchers you may find in them interesting replicate but in different situation, eg. If research had been on Reasons of Poor Performance in Physics you may repeat in Chemistry

(iv) ***Practical issues:*** society is always faced with many burning issues, for example, cost sharing, free primary education, you may decide to take one of these issues and investigate it logically with the view of finding solution to the problem.

(v) ***Deductive and inductive reasoning:*** Deductive reasoning is a conclusion that is made from particular to general. For example, Mariam is good at arts subjects, Mariam is a girl, and therefore girls are good at arts subjects. Inductive reasoning is the conclusion that is made from general to specific. For example, girls are dependent, Asha is a girl, and therefore Asha is dependent.

(vi) ***Exposure to field work or situations:***

(vii) ***Brain storming and consultation:***

Educational issue as research problem

There are many issues as regarded as research problems in education. Those include:

(i) Teaching and learning process

(ii) Students learning and their performance

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(iii) Learning diversity
(iv) Factors affecting students' performance
(v) Problems relating medium of instruction
(vi) Comparative system of education
(vii) Socio-cultural factors affecting students' learning.

Statement of the problem

Before conducting research, it is very important to ensure that research problem must be clear and should be stated with specific variables concerned that will show clear direction of investigation. The statement of the problem should have the following:

(i) It should indicate the variable of interest to the researcher and the specific relationship between those variables being investigated.
(ii) It defines all relevant variables either directly or indirectly.
(iii) It should be stated as early as possible because it gives direction
(iv) Usually, it is accompanied by presentation of the background of the problem, justification and significance.

RESEARCH ETHICS

Research ethics are moral principles that govern how researcher should carry out his research work. It is the application of moral rules and professional codes of conduct to the collection, analysis, reporting, and publication of information about research. In particular, it is an active acceptance of subjects' right to privacy, confidentiality, and informants consent. The following are examples of research ethics:

(1) Researcher should maintain confidentiality about information obtain from respondents.
(2) Researchers should seek the respondents' permission before they start collecting data.
(3) Researcher should respect the subject's right to privacy and dignity.
(4) Researcher should accept the fact that the subjects have the freedom to deny or withdraw from participation.
(5) Researcher should protect subjects from mental and physical harm, danger and stress.
(6) Researcher should maintain objectivity and integrity in the research.
(7) Researcher should avoid providing incentives to respondents; this might make them information which could be exaggerated to impress the researcher.

Research misconducts

These are actions if you can do them you have gone against research ethics:

(1) Fabrication… making up data or results and recording or reporting them.
(2) Falsification… manipulating research materials changing data such that the research is not accurately represented in the research record.
(3) Plagiarism… presents any portion of other person work in the way that it may seem yours.
(4) Providing incentives to respondents… this might make them provide information which could be exaggerated to impress the researcher.

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(5) Invasion of privacy… interfering deep internal affairs of respondents could make them offended, upset and embraced.
(6) Forced participation… it is unethical to collect data without consent of the respondents and their respective leader.
(7) Causing harm to respondents or community at large, harm may be physical, social or psychological.
(8) Bias on information… sometimes the researcher can deliberately avoid information for purpose of avoiding the fact to cover up some people's interest or his/her report thus becomes distorted.

Important of research ethics

There are several reasons why it is important to obey to ethical norms in research, as follows:

- It promotes 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 minimize error.
- It promotes the common values that are essential to collaborative work, such as trust, accountability, mutual respect, and fairness. For example, many ethical norms in research, such as guidelines for authorship, copyright and patenting policies, data sharing policies, and confidentiality rules in peer review, are designed to protect intellectual property interests while encouraging collaboration.
- It helps to attract public support for research people are more likely to find a research project they cannot trust the quality of research
- It helps to ensure that researchers can be held accountable to the public. For instance, conflicts of interest, the human subject's protections, and animal care and use are necessary in order to make sure that researchers who are funded by public money can be held accountable to the public.
- It helps to build public support for research. People are more likely to fund a research project if they can trust the quality and integrity of research.
- It promotes a variety of other important moral and social values, such as social responsibility, human rights, and animal welfare, compliance with the law, and public health and safety.

Principles of research ethics

There are a number of **ethical principles** that should be taken into account when performing research. At the core, these ethical principles stress the need to

(a) **Do good** (known as **beneficence**) and
(b) **Do no harm** (known as **non-malfeasance**).

In practice, these ethical principles mean that as a researcher, you need to:

(a) Obtain **informed consent** from potential research participants;
(b) Minimise the **risk of harm** to participants;
(c) Protect their **anonymity** and **confidentiality**;
(d) Avoid using **deceptive practices**; and
(e) Give participants the **right to withdraw** from your research.

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We will discuss five ethical principles and their practical implications when carrying out research.

PRINCIPLE ONE: Obtaining informed consent

One of the foundations of research ethics is the idea of **informed consent**. Simply put, **informed consent** means that participants should understand that they are taking part in research and what the research requires of them. Such information may include the purpose of the research, the methods being used, the possible outcomes of the research, as well as associated demands, discomforts, inconveniences and risks that the participants may face.

PRINCIPLE TWO: Minimising the risk of harm

Research report should not harm participants. Where there is the possibility that participants could be harmed or put in a position of discomfort, there must be strong justifications for this. There are a number of types of harm that participants can be subjected to. These include:

- Physical harm to participants.
- Psychological distress and discomfort.
- Social disadvantage.
- Harm to participants? Financial status.
- An invasion of participants? Privacy and anonymity.

PRINCIPLE THREE: Protecting anonymity and confidentiality

Protecting the **anonymity** and **confidentiality** of research participants is another practical component of research ethics. After all, participants will typically only be willing to **volunteer** information, especially information of a private or sensitive nature, if the researcher agrees to hold such information in confidence. However, this does not mean that all data collected from research participants needs to be kept confidential or anonymous.

PRINCIPLE FOUR: Avoiding deceptive practices

You need to tell participants how they are taking part in research and what the research requires of them. This is part of what makes the use of deceptive practices controversial. For this reason, in most conditions, research should **avoid** any kinds of deceptive practices in order to get real information from participants.

PRINCIPLE FIVE: Providing the right to withdraw

Research participants should always have the **right to withdraw** from the research process. Participants should have the right to withdraw at any stage in the research process. When a participant chooses to withdraw from the research process, they should not be **pressured** or **forced** in any way to try and stop them from withdrawing.

The basic educational ethics

Education is also a fundamental process of human life. Therefore, in education ethics has a very important and effective role. In order to be a good human, ethics should be placed as a course in educational system.

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RESEARCH QUESTIONS

A research question is the question which guides to reach specific objectives of the research. It provides enough specific information that reader can easily understand its purpose without needing additional explanation.

Characteristics of a good research question:

- It should be clearly state what the researcher needs to do.
- It should reflect to specific objective.
- It should be not too broad and not too narrow.
- It should not too easy to answer.
- It should not too difficult to answer.
- It should be researchable.
- It should be analytical rather than descriptive.

There are three types of research questions, namely

i) descriptive
ii) comparative
iii) causal

1) Descriptive Research questions

Descriptive research questions are questions used to help a study that aims to describe something. Questions starting with "how much?", "what amount?", "what is/are" etc. comes under the heading of descriptive research questions. **Example Question: How often do Muslim students obtain foreign university scholarships?**

2) Comparative Research Questions

Comparative research questions are questions used to analyse the difference between two or more groups, on the dependent variables, we use comparative research questions. Comparative research questions begin with "what is the difference between?". **Example Question: What are the differences in the usage of computer devices between male and female college students?**

3) Causal Research Questions

Causal research questions are questions used to find out whether a variable causes one or more outcome variables. It is also called a relationship research question. **Example Question: What is the relationship between age and attitudes towards online reading among youth?**

Purpose of research question

The major reasons for creating research question may include:

- It guides researcher to reach specific objectives of the research
- It state clearly what the researcher wants to do
- It gives the scope of the study
- It is essential to the research process.
- It influences most of the rest of the steps taken to conduct the research.

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Constructing research question

In writing research question, you should:

1. Specify your specific concern or issue.
2. Decide what you want to know about the specific concern or issue.
3. Turn what you want to know and the specific concern into a question.
4. Ensure that the question is answerable.
5. Check to make sure the question is not too broad or too narrow.

Research Data

Research data is the body of information collected systematically through research procedures to explain a research problem.
There are two types of data:

- Primary data, and
- Secondary data

Primary data is the fresh data collected for the first time by researcher in the field.
Secondary data is the data collected by reading written sources, examples, books, journals, theses and dissertations.

HYPOTHESIS

Hypothesis is logic and tentative prediction of the outcome of the results. It is an assumption based on what one expects to find out in the field. For example, "Effects of students' attitudes on their performance in Mathematics". Hypothesis based on the relationship between variables in the study (i.e I.V and D.V). for example, if my I.V was attitude and D.V performance, my hypothesis would be: There is no significance effect of student's attitudes on their performance in Mathematics.

Variable

A variable is defined as the factor or characteristic of interest that a researcher would like to handle, observe or manipulate in the research. In other words, it is any characteristic that shows variation or differentiation in term of sex, age, weight, height, and intellectual ability or academic performance. There are two major types of variables:

(i) Independent variable
(ii) Dependent variable

But there is another type of variable known as ***extraneous variable.***

Independent variable (I.V) is variable which researcher manipulates in order to determine its effects on another variable. There are two types of independent variable. These are **treatment** variable and **attribute** variable.

Dependent variable (D.V) is observed to determine the effects of manipulating the independent variable.

Extraneous variable (E.V) is that whose effect is not needed in the study.

Characteristics of good hypothesis

The following are the basic characteristics of good hypothesis:

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- It should be simple and clear.
- It should be precise
- It should be testable
- It should indicate the relationship between the variables.
- It should not be too long

Importance of Hypothesis

- Helps researcher to select appropriate tools of data collection
- Guides researcher to keep on track and not go out of research objectives
- Directs researcher about type and source of the required data
- Helps researcher to understand the problem in deep
- Helps researcher to draw logical conclusion

Hypothesizes for educational research problem

A research hypothesis is usually stated before the study begins. As well stated it gives direction to how data will be conducted. It should be clear, precise and simple. It is declarative and more specific than statement of the problem.

There are two ways of stating hypothesis:

(i) Null hypothesis
(ii) Alternative hypothesis.

Null hypothesis is one that is stated in negation. It indicates "no" relationship between the variables. For examples, "There is no difference between Boarding and Day Schools".

Alternative hypothesis is stated to indicate the actual expectation or relationship. For example, "There is a difference in academic performance in science between students in Boarding and Day Schools".

Advantages of formulating hypothesis

- It enables the researcher to understand the problem with the great clarity.
- It specifically limits the enquiry of the interaction of certain variables.
- It verifies the guessing statement on the research.
- It facilitates extension of knowledge in the area of study.
- It gives direction to collect the required data.
- It suggests the methods appropriate for collecting and analyzing data.
- It forms framework as ultimate conclusion of the problems.

Problems Facing Hypotheses Formulation

A researcher may face different problems when he wants to formulate hypothesis. Like:

- Insufficient knowledge about the problem
- Unclear hypothesis, for example, if he uses ambiguous or technical words
- Bias. Using self-ambition to create hypothesis instead of looking the real problem
- Time. If time is not enough it may lead to poor hypothesis

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LITERATURE REVIEW

Literature review is reading and including previous studies which are related to your work. It is reading various publications in order to know what other people say about what you are going to investigate. At this stage, the researcher reads and critically analyses existing information about topic or problem of the research.

Literature review enables researcher to conceptualize the research topic. The review provides a clear understanding of the chosen field of study. A comprehensive literature review makes it easier for the researcher to identify gaps and avoid duplication of the work of the other researchers.

The researcher gains insight into ways of collecting and analyzing data. Beside this, it helps the researcher to formulate research questions and to check the objectives for the accuracy.

Purpose of literature review

The major reasons for reviewing literature review may include

- It enables the researcher to know what has been done that is related to present study.
- It enables the researcher to avoid unnecessary repetition of what has already been done.
- It helps the researcher to re-define his research problem.
- It helps the researcher to select adequate samples.
- It guides researcher to formulate reasonable hypothesis
- It helps the researcher to select the appropriate study method.

Steps of literature review

You should review literature review in the following manner:

- Start with the most recent findings.
- Read and record the sources.
- Select how to go about extracting information.
- Select key words of interest.
- Indicate how literature relates to your study.
- Take note of methods, sample, instruments and major findings
- Specify the author, year, pages and title of the subject.

Literature review about given research problem

The following is an example of literature review. It should help you in writing your literature review.

Topic given: **"Investigation of the relationship between personality and academic performance"**

Literature review:

> Many investigation of the relationship between personality and academic performance have been reported. Studies by Jones (1960), Morrison et. Al (1965), Ridding (1967) and Savage (1966) point out that extroverts tend to be better than introverts in primary and early secondary levels of education. Similarly, Butcher (1963) and Hall Worth (1981) found a link between neurotics and poor academic performance at all levels. This view was supported by Enon (1988) in his study on Primary Leaving Examinations...

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In a large scale study, Eysenck and Cookson (1969) using 4,000 primary school pupils confirmed that the stable extroverts tend to be more successful than introverts …

In another turn, Warburton (1968) and Entwistle (1972) advanced that there is convincing evidence of the superiority of the introvert in university and colleges. They were supported by Lavin (1967) and Lynn Gordon (1961).

Documents containing information related to literature review

The following are basic sources of literature review in research:

- Journals
- Dissertations/Theses
- Encyclopedia
- Textbooks
- Newspapers
- Website publications, etc.

Common mistakes when writing literature reviews

- Giving personal opinion
- Irrelevant content
- Using non scholarly sources
- Using author's first and last names in the text
- Bad organization and structure

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POPULATION, SAMPLE AND SAMPLING

Population is the people that a researcher has in mind from whom he can obtain information. For example, in study about discipline in schools, the possible population can be teachers, students, parents, educational officers, etc. So, simply, population is the whole group of people from whom data can be collected.

It is not possible to reach all teachers and students in school or parents in the society for data collection. So you will think of teachers, parents or students to use, this is the target population.

Sample is a number of people or things taken from a population and used to provide information about the large group. For example, from accessible population which might consist of 1000 students, you might think to select only 200 students. The 200 students selected to participate in the study is called **sample size**.

Sampling is the process of selecting the some people who will participate in study to represent population.

Types of sampling

There are two main types of sampling. These are:

- Probability sampling
- Non probability sampling

Probability sampling is the type of sampling in which every element in the population has an equal chance of being selected.

Non probability sampling is the type of sampling in which the selection of individuals is done not by chance.

Sampling techniques

There are many ways of selecting samples. These ways sometimes are called types of sampling techniques:

(a) Simple random sampling
(b) Stratified sampling
(c) Clustered sampling
(d) Systematic sampling
(e) Purposive sampling
(f) Snowball sampling
(g) Accidental sampling

Simple random sampling is the type of sampling which provides equal chance to every member in the population to be included in the study. In this type of research every member in the population is assigned as unique number. One way of using this method is lottery system, for example,

- Numbers are written on the pieces of papers
- Put in one container or box.

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- Shakes container very well.
- Select the sample randomly

If you researcher wants 10 samples, he will pick out any 10 pieces of paper.

Stratified sampling is the sampling technique in which element or individual to form a sample are selected from homogenous sub population group (strata). The people of the same characteristics are put together. For example, sex group (i.e. male and female), class group (i.e. F1, F2, F3), age group (i.e. 15-20, 21-24) etc. This method ensure that member from each group participate in the study. If the population is Form One at Kiembe Samaki Secondary School and there are three classes F1A, F1B and F1C, then the group will be classes. Use proportional method to calculate sample if we want 10% from each group as shown in the table below:

Class	**F1A**	**F1B**	**F1C**
Number of students	60	52	38

Total population		= 150
Total sample	(10%of 150)	= 15
F1A	=60/150x15	= 6
F1B	=52/150x15	= 5
F1C	=38/150x15	= 4
	Total Sample	= 15

Clustered sampling is the sampling technique which a researcher randomly selects a group and every member in the group participate in the research. Population of the study is divided in groups (clusters). A cluster can be a village, a town, a region, a class, a school, etc. This sampling technique is used when the population is spread across a wide area. All observation in the selected clusters is included in the study. For example, when research wants to use only one class of Form One students, but there are three classes (i.e. F1A, F1B, F1C) researcher can randomly select one class and all members of that class will be sample.

Systematic sampling is the sampling technique in which the selection of individual from the target population into the sample done in to certain member, each member of the sample comes after an equal interval from its previous member. Assume you have population size of 300 and your sample size is supposed to be 60. Calculate the sampling interval and state the meaning of your answer.

a) Steps to follow in systematic sampling technique.

- Understand your population and sample size
- Find sample interval
- Choose starting point
- Select members from regular interval.

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b) Sample interval $= \frac{\text{population size}}{\text{sample size}} = \frac{300}{60} = 5$

c) This means you have to select every fifth member from the population.

Purposive sampling is the sampling technique which researcher selects sample based on certain purpose. The researcher uses his/her knowledge to choose elements or individuals to be included into the sample for the study. This is used when there is a few people who fit to the study. For example, to study the discipline behaviour of classes, researcher purposely selects class monitors only.

Snowball sampling is the sampling technique where by researcher begins the study with few respondents available and then the present are asked to recommend others who meet criteria of the study. In this type of sampling researcher asks the first respondent to name the second, the second to name the third, etc. It is normally used to get people who do illegal activities (like drug dealers, sex workers, prostitutes, thieves, etc)

Accidental sampling is the sampling technique in which the researcher comes into contact with the respondent accidentally, where they are found and included into the sample. Here researcher selects any person who comes near him to be his sample. For example, to study the students who leave the classes and stay in bushes near school. Any student who is in the bush can be selected as a sample.

ADVANTAGES OF SAMPLING

i) Sampling reduces the cost of meeting entire population.
ii) Research can be conducted over wider areas as Limited portion of universe involved.
iii) Sampling increases speed of conducting research, i.e. research processes like data collection, analysis and interpretation can take less time.
iv) Through sampling comprehensive scope and flexibility exists.
v) Sampling increases accuracy in the data processing due to the Limited area of coverage.
vi) Sampling helps researcher to establish better rapport with the respondents which help in valid and reliability of the results.

Research Instrument/Tool is the technique or method used for data collection in research. There are many tools of data collection but the common ones are:

(a) Observation
(b) Questionnaire
(c) Interview
(d) Focus group discussion
(e) Measurements

Observation is the method of data collection which is done by looking phenomena. Observation relies on researcher seeing, hearing, testing and smelling things. There are three ways in which observation can be made.

(a) Participant observation

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(b) Non participant observation
(c) Naturalistic observation

Advantages of Observation

Field observation as a research tool of data collection has the following advantages:

- A first-hand information are easily collected
- The method allows full participation of researcher in the process of data collection
- The study takes place in the natural environment of the participants.
- The method helps to develop the spirit of self-reliance in the people.
- Degree of bias is much minimized.

Disadvantages of Observation

Field observation as a research tool of data collection has the following disadvantages:

- Respondents may change behaviour once realize that they are observed
- The researcher cannot have data of the past events.
- It is costly in terms of time and money
- It is so limited to small population
- Some events cannot be observed
- Sometimes may be risk when researcher observes illegal people.

Questionnaire is a list of questions written in a paper. It is used by researcher as a tool of data collection. There are two types of questionnaire:

- Close-ended questionnaire
- Open-ended questionnaire

Close-ended questionnaires are short answer questions which require no details. They include "yes" or "no" questions.

Open-ended questionnaires are long answer questions which require elaborated details. For example, 'what do you understand by educational changes'?

Quantitative Research is a type of research approach that describe phenomenon in numbers in steads of words. The quantitative research methods are descriptive and experimental.

Descriptive research is research method that describes the characteristics or relationship that exists.

Types of Descriptive research

1. **Survey** is the study generally in the form of interview and questionnaire. Survey is used to collect data from large number of sample at a particular sample so as to describe the nature of the problem being investigated. Types of survey:

- Longitudinal survey
- Cross-sectional survey
- Panel survey
- Trend survey

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2. **Correlation study** is the research method which is used to establish relationship among phenomena so as to describe, predict or control their occurrences. Example, relationship between religion and party. Types of correlation:
   - Positive correlation
   - Negative correlation
   - Zero correlation

RESEARCH PROPOSAL

Definition

Research proposal is a document which proposes a research project. This document is written by researcher to provide a detailed description of the proposed research.

Characteristics of Research proposal

A good research proposal has the following characteristics

- It has a specific topic/subject
- It clearly defines the research problem
- It clearly states objectives of the study
- It indicates output and significance of the study
- It contains relevant literature review
- It clearly states how to solve the research problem
- It indicates research gap
- It indicates research area
- It should indicate methodology of the study
- It should indicate action or work plan
- It should indicate budget of the proposed study.

Purposes of Research proposal

- It should indicate topic to be investigated
- It gives chance to explain significance of the study
- It convinces the readers that your study is original, interesting and essential
- It demonstrates that you are familiar with research field
- It describes methodology used in the study.

Components of Research proposal

Research proposal tend to follow similar format. Although, there are variation depending upon kind of institution, purposes and nature of the research. Research proposal has the following structure:

1. Title
   This is topic to be investigated

2. Introduction
   - Background to the study
   - Statement of the problem
   - Purpose of the study
   - Specific objectives
   - Research questions or hypothesis
   - Scope of the study

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- Limitation of the study

3. Literature review
   - Theoretical literature review
   - Empirical literature review
   - Synthesis of literature review
   - Research gap or lacuna

4. Theoretical and conceptual framework
   - Theoretical framework
   - Conceptual framework

5. Methodology
   - Research approach
   - Research design
   - Study area
   - Unit of analysis
   - Population
     - Target population
     - Accessible population
   - Sampling design
     - Sample size
     - Sampling unit
     - Sampling frame
     - Sampling techniques
   - Data collection methods and research instruments
   - Validation of research instruments
   - Data collection process
   - Data analysis plan

6. Time schedule
   This is also known as action plan or work plan. It indicates the sequence of activities will be done in particular time. Time schedule can be written in an outline format or in a matrix format.

7. Proposed budget
   This indicates the cost that will be involved in undertaken activities. Budget helps funders to determine the cost and advice researcher to make some modification in the proposal.

8. References
   These are books, journals, newspapers, periodicals, dissertations, theses and encyclopedia which are used in your work.

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PROPOSAL WRITING PROCESS

Research proposal is a document written by researcher to provide detailed description about proposed research. Here, we will explain on how to write or draft a research proposal step by step.

1. Title/Topic

The research proposal title is an account summarizes the main idea or ideas of the study. A good title contains the fewest possible that adequately describe the contents and purpose of research. Example of research proposal title:

- *Factors Contributing Poor Performance to Standard Six National Examinations in West B District, Zanzibar.*

A title of research proposal should have the following features:

- It should be clearly stated and specific.
- It should be researchable.
- It should be directed towards solving a particular problem.
- It should be original.
- It should not have elements of bias.

2. Introduction

Introduction is an initial pitch of an idea designed to create interest in the reader about topic and proposal. It is a brief but precise statement about the research will be conducted. Introduction should convey the reader, what you what to do, what demands of the study and your desire for the topic. Introduction of research proposal involves the following sections;

- **Background to the study**

In this section researcher should identify the problem prevailing, explain its trend if possible from the first time it was reported. The background of the study establishes the context of the research to be conducted. It explains why the particular research is important and essential to understanding the main aspects of the study. The background justifies the need for conducting the study and summarizes what the study aim to achieve.

- **Statement of the problem**

In a research, a problem refers to something that is not easily understood. The definition of the problem is often referred to as problem statement. It shows the existing gap of knowledge. The problem is translated to series of questions that help to determine the direction of actual research. A problem statement gives a clear statement of assignment to undertaken. After stating the problem under investigation, the researcher should provide reasons why the problem is critical enough to warrant the investigation.

- **Purpose of the study**

Purpose of the study is also known as general objective of the study. This is an intention for conducting proposed study. It should read the same as the title of research to be conducted. It should state clearly the single goal of the research. For example:

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The main purpose of this study is to investigate factors which contribute poor performance to Standard Six National Examinations in West B District, Zanzibar

- **Specific objectives**

Objectives are the specific issues within the scope of the study the researcher wants to focus on. Objectives should be specific and should determine the research questions to be asked, data collections procedures to be used, and the form the research study takes. Examples of research questions:

(1) To identify student's commitment to learning process
(2) To describe the role of teacher's qualifications on academic performance
(3) To examine the role of teaching process in improving academic performance

- **Research questions or hypothesis**

Research questions are the questions which guides researcher to reach specific objectives of the study. These are questions in which researcher would want to answer in proposed study. Examples of research questions:

(1)

Hypothesis is logic and tentative prediction of the outcome of the results. It is an assumption based on what one expects to find out in the field. These are statements of what the researcher think the investigation will reveal. The study will then seeks to prove or disprove the hypothesis. Examples of hypotheses:

(1)

Whether the study needs research questions or hypotheses depend on the nature of the study. Researcher will have three options to decide whether to use research questions, hypotheses or both research questions and hypotheses depending on the nature of the research approach used. If the study is qualitative in nature, a researcher will use research questions. If the study is quantitative in nature, a researcher will have to choose using hypotheses or both research questions and hypotheses. If the study employs mixed approaches, the researcher will have to use both research questions and hypotheses.

- **Scope of the study**

Scope is the boundary in which the study focuses on. The scope of the study identifies the extent or depth of the study in terms of subject, methods, theory, objectives, area, timeframe and issues to which to which the research is focused. It is very important to narrow down the coverage of the study by limiting the scope. Example:

The study focuses on the …….. This study will include standard six leavers, teachers, education officers and school committee members. It is focused on performance of pupils during national examinations. The study does not cover any other pupils who have not done examinations.

- **Limitation of the study**

Limitations are restrictions, defects or acts of imposing restrictions that may affect the results of the study. Limitations could result from inadequate time and funds, location of the study and samples selected. In writing limitations, the researcher

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may consider the possible constraints that might hinder the effectiveness of the research process and state how he will handle those constraints.

3. Literature review

Literature review is reading and including previous studies which are related to your work. In literature review a researcher should describes the relevant works to describe the research area to widen understanding of the research problem. Researcher shows how the previous studies are related to the current studies. Literature review can be divided into two categories. These are:

(a) Theoretical literature review
(b) Empirical literature review

(a) Theoretical literature review

This is a review intended to gather general or theoretical knowledge about certain phenomena. In this stage, a researcher will provide definitions of the concepts and terms, state the arguments of different theorists presented in publications and describe various principles and views as held by various people in the society.

(b) Empirical literature review

This is a review intended to provide knowledge and experiences that were created by other researchers when conducting their studies. A researcher should critically look at variables used; theories used, type of data collected, research objectives, methodologies used, the research findings, conclusion and recommendation made. Empirical literature review gives researcher insight to address the research gaps.

(c) Synthesis of literature review

In synthesizing literature review, researcher can conceptualize the research topic. The review provides a clear understanding of the chosen field of study. A comprehensive literature review makes it easier for the researcher to identify gaps and avoid duplication of the work of the other researchers. The researcher gains insight into ways of collecting and analyzing data. Beside this, it helps the researcher to formulate research questions and to check the objectives for the accuracy.

(d) Research gap or lacuna

A research gap is the area that has not yet been explored or is under explores. This could be population or sample (size, type, location, etc), research methods, data collection or analysis or other research variables or conditions.

4. Theories of Research

Theories are formulated to explain, to predict and understand phenomena, and in many cases to challenge and extend existing knowledge within the limits of the critical boundaries. Theories are usually used to help design a research question, guide the selection of relevant data, interpret the data, and propose explanations of the underlying causes or influences of observed phenomena. Researcher can use theoretical and conceptual framework in his research.

(a) Theoretical Framework

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The theoretical framework introduces and describes the theory that explains why the research problem under study exists. So researcher has to identify a theory and explain how it is related to his study or rather how it is applied in the context of his proposed study. The researcher should consider these questions that guide the choice of theory:

(i) Which theory should I use?
(ii) What does it say?
(iii) How does it apply in my study?

(b) Conceptual Framework

There are many ways of defining a conceptual framework. It can be any of the following:

- A set of coherent ideas or concepts organized in manner that makes them easy to communicate with other.
- An organized way of thinking about how and why research takes place and how we understand its activities.
- The basis for thinking about what we do and about what it means, influenced by the ideas and research of others.

In principle, conceptual framework consists of concepts that are placed within a logical and sequential design. It represents less formal structure and used for study in which existing theory is inapplicable or insufficient.

5. Research Methodology

Research methodology is the specific procedures or techniques used to identify, select, process, and analyse information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability. In writing research methodology, researcher has to indicate the followings:

- Approach used
- Research design employed
- Study area selected
- Unit of analysis
- Population, sample and sampling techniques used
- Data collection methods
- Data analysis techniques used
- Data presentation approach selected
- Modes of disseminating research findings.

It is also important to explain how research ethics will be taken into proposed study.

(a) Research approach

The research approach is a plan and procedure that consists of the steps of broad assumptions to detailed methods of data collection, analysis, and interpretation. It is, therefore, based on the nature of the research problem being addressed. Here, researcher has to specify the type of research approach that will be employed. Researcher states whether the study will employ a qualitative or quantitative approach or mixture of two approaches and has to justify that decision.

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(b) Research design

Research design is the framework of research methods and techniques chosen by a researcher. The design of a research topic explains the type of research (experimental, survey, correlational, semi-experimental, review) and also its sub-type (experimental design, research problem, and descriptive case-study).

(c) Study area

Study area means the land surface area which was mapped and quantitatively sampled during the baseline vegetation inventory. The study area generally coincides with the permit area (or amendment area) but may exceed those boundaries with prior approval from the Administrator.

(d) Unit of analysis

The unit of analysis is the major entity that is being analyzed in a study. It is the 'what' and 'who' that are being studied. For instance, any of the following could be a unit of analysis in a study:

- Individuals
- Groups
- Artifacts (books, photos, newspapers)
- Geographical unit (town, census, tract, state)
- Social interactions (dyadic relations, divorces, arrests)

(e) Population

Population refers to a complete set of element (persons or objects) that possess some common characteristics defined by the sampling criteria established by the researcher. A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. All individuals or objects within a certain population usually have a common, binding characteristic or trait.

- **Target population**

  The population for whom the findings will be generalised or for which information is desired. To whom are the findings relevant:
  - Teacher?
  - Farmer?
  - Women?
  - Children?
  - Medical Doctors?
  - Pastoralists?
  - All people with HIV?
  - All school age children with asthma?
  - All pregnant teens?

- **Accessible population**

  Portion of the population to which the researcher has to access; may be a subset of the target population. It is so called study population. It may be limited to region, state, city, country, or institution. It is from the accessible Population that researcher draw their sample. For example, your target

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population on the study about teacher motivation in secondary schools in Tanzania can be secondary school teachers but since you cannot visit all regions, then you can decide to involve primary school teachers in West B Municipality. Therefore, secondary school teachers in West B Municipality that you will be able to meet during the study constitute the accessible population.

- **Sampling design**
  A procedure or plan of how one will obtain or select a sample a given population before any data collected.

- **Sample size**
  Researcher should indicate the number of respondents included in the sample and composition. The size of sample to be selected has to be justified and it should be stated whether it representatives and why one thinks that it representative. The researcher should also justify the composition of the sample; this means that one should give reasons for selecting certain individuals or categories of individuals in the study.

- **Sampling unit**
  This is that element or set of elements considered for selection in some stage of sampling (same as element, in a simple single stage sample). In a multi-stage sample, the sampling unit could be blocks, households, and individuals within the households. In a university sampling unity can be a faculty, department, directorate, institute, school, etc.

- **Sampling frame**
  This is the actual list of sampling units from which the sample, or some stage of sample, is selected. It is simply a list of the study population. In the college, researcher can get a list of all doctors, tutors and teachers. From that list he can go on selecting some individuals to be included in the sample.

- **Sampling techniques**

These are ways or methods used to select sample from the study population. There are many ways of selecting samples. These ways sometimes are called types of sampling techniques:

(a) Simple random sampling
(b) Stratified sampling
(c) Clustered sampling
(d) Systematic sampling
(e) Purposive sampling
(f) Snowball sampling
(g) Accidental sampling

(f) Data collection methods and research instruments

Data collection method/research instrument/tool is the technique or method used for data collection in research. There are many tools or methods of data collection but the common ones are:

(a) Observation

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(b) Questionnaire
(c) Interview
(d) Focus group discussion
Measurements

Methods of data collection can be divided in to primary and secondary data collection methods. Primary data collection methods are questionnaire, interview, focus group discussion and observation. Secondary data collection methods are documentary analysis, narrative analysis, history inquiries, films, videos and photographs. The research instrument used under primary data collection methods are questionnaire, interview schedules and observation checklists. The research instrument used under secondary data collection methods are documents like journals, reports, films, videos and photographs.

Validation of research instruments

Validity of a research instrument is the degree to which the instruments can provide accurate data as required by researcher. Validation is a process entails to determine whether the instruments will gather the expected data or not. Once it it has been established that a research instrument is valid then it means the data that will be collected will be accurate and reliable. So researcher can indicate methods like pre-testing, pilot-testing by using methods like Kuder-Richardson coefficient and Cronbach's alpha.

Data collection process

This involves explaining how researcher actually carried out the data collection process and which instruments used and why. Here, researcher has to indicate which method was used to which respondents and why. This means that researcher has to specify who was given the questionnaire and why, who were interviewed and why, who were subjected to focus group discussion and why and to whom observation was carried out and why, and how documentary review was carried out and why.

Data analysis plan

In this section, researcher indicates how he is going to analyze qualitative and quantitative data. He should identify the methods that are going to be used in analyzing the data at hand. Data analysis plan should reflect the theoretical and conceptual framework and has to be in line with research objectives as well the hypothesis of the study.

6. Time Schedule/Work Plan

In this section researcher has to explain the sequence of research activities including their respective time frame. Researcher can use the Gantt chart to indicate the sequence of the research activities as follow:

Sample of Time Schedule

No.	Activities	Sept	Feb	Apr	May

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1.	Preparing a Research Proposal				
2.	Preparing Research instruments				
3.	Obtaining Ethical Clearance				
4.	Data Collection				
5.	Data Analysis				
6.	Writing a draft of the dissertation				
7.	Preparing the final dissertation				
8.	Presenting results for getting comments				
9.	Submission of Dissertation				

7. Proposed budget

Researcher has to indicate the proposed budget for the proposed study. The budget facilitates decision for funding the research project. Without indicating a budget it can be difficult for sponsor to provide funds for executing the proposed study. The following is an example of proposed budget for study.

S/N	Item Description	Amount (TZS)
1	**Labour**	
	Allowance for four researchers	
	Data collection	
2	**Secretarial services**	
	Printing	
	Photocopies	
	Notebooks and pens	
	Laptop	
3	**Transport**	
	Transport for four researchers (field to college) for 30 days	
4	**Materials and Supplies**	
	Photocopying, report production and binding	
	Sub total	
	Grand total	

8. Referencing

References simply give list of all publications that have referred to in the project and enable reader to check the source of evidence on which an argument was based. This list of publications should be alphabetically arranged using last

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name of the authors. In writing references, researcher should make sure that all work cited in the text qre indicated in the list of references. There are different styles of writing references, the following are some of referencing styles:

(i) APA (American Psychological Association) style
(ii) MLA (Modern Languages Association) style
(iii) Oxford style
(iv) Chicago/Turabian style
(v) Harvard style, and
(vi) Vancouver style

In writing references, writer should consider the following steps:

(i) Name(s) of the author(s) starting with last name and followed by initials of other name(s).
(ii) Year of publication
(iii) Title of the publication (book, article, dissertation, newspaper, etc.)
(iv) Town where book published
(v) Name of publisher.

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WRITING A RESEARCH REPORT

RESEARCH REPORT WRITING

Research Report

A research report is a skilled document that outlines the processes, data, and findings of a systematic investigation. It is a summary of the research process that clearly descibes findings, recommendations, and other important details. The research report is called dissertation or theses.

Characteristics of a Research Report

A research report has some of the following characteristics:

- It is a detailed presentation of research processes and findings.
- It usually includes tables and graphs.
- It is written in a formal language.
- A research report is usually written in the third person.
- It is informative and based on first-hand verifiable information.
- It is formally structured with headings, sections, and bullet points.
- It always includes recommendations for future actions.

Types of Research Report

The research report is classified based on 2 things; nature of research and target audience.

1. Nature of Research

In this classification, there are two types of research reports. These are qualitative research report and quantitative research report.

(i) Qualitative Research Report: is the type of report that outlines the methods, processes, and findings of a qualitative method of systematic investigation. A qualitative research report is usually descriptive in nature.

(ii) Quantitative Research Report: is a type of research report that pays attention to numerical or statistical values in a bid to find answers to research questions. In this type of research report, the researcher presents quantitative data to support the research process and findings.

2. Target Audience

In this classification, there are two types of research reports; technical and popular research report.

(i) Technical Research Report: is a type of report that researcher presents after conducting industry-based research. This report is highly specialized because it provides information for a technical audience; that is, individuals with above-average knowledge in the field of study.

(ii) Popular Research Report: is type of report written for a general audience; that is, for individuals who do not necessarily have any knowledge in the field of study. It is written in very simple language, which makes it easy to understand the findings and recommendations.

Importance of a Research Report

A research report has the following importance:

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(i) It is a knowledge transfer: A research report serves as a means to effectively communicate the findings of a systematic investigation to all and various.

(ii) It identifies knowledge gaps: With a research report, researcher is able to identify knowledge gaps for further inquiry. A research report shows what has been done while hinting at other areas needing systematic investigation.

(iii) It describes the research process: Research report is an important document that describes the research process, and it is normally considered as an objective and accurate source of information.

(iv) It guides to writing a research report: A lot of detail goes into writing a research report, and getting familiar with the different requirements would help you create the ideal research report.

Structure/Format of a Research Report

Writing a research report may differ in scope and treatment from place to place. The writer is expected to follow a conventional style according to academic institution. Generally, a research report has three major parts:

(1) Preliminary pages,
(2) Main body of the report, and
(3) Supplementary material

Each of parts contains different kinds of content as in the tables below:

Major parts	Individual sections
1. Preliminary pages	1) Title of research 2) Certification 3) Declaration 4) Copyright 5) Acknowledgement 6) Dedication 7) Abstract 8) Table of content 9) Abbreviations 10) List of tables/ figures/ diagrams, etc
2. Main body of the report	1) General introduction 2) Literature review 3) Methodologies

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	4) Findings and Discussion
	5) Conclusion and recommendation
	1) Bibliographies/References
3. Supplementary pages	2) Appendices

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FORMAT OF RESEARCH REPORT

1. PRELIMINARY PAGES

This part consists of the following components:

(i) **Title page**: This is page is written on the first page of report which is usually unnumbered. It contains the title of the study which should be concise and point to the aims, objectives, and findings of a research. It also indicates name(s) of author(s), academic level sought, month and year of submission. For example:

THE EFFECTS OF IRRESPONSIBLE SEXUAL BEHAVOUR AMONG STUDENT TEACHERS IN ZANZIBAR

MUSSA JAMAL MUSSA

A PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DIPLOMA IN PRIMARY EDUCATION OF THE ZANZIBAR MUSLIM COLLEGE

OCTOBER, 2021

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(ii) **Certification:** This page describes certification of the supervisor to certify that he has read and recommended for acceptance. It should show name, signature of supervisor and the date he certified. Example:

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by The Zanzibar Muslim College a project report titled: "**The Effects of Irresponsible Behaviours Among Student Teachers in Zanzibar"** in partial fulfilment of the requirements for the award of Diploma in Primary Education of the Zanzibar Muslim College.

……

Dr. Hamad Khamis Juma

(Supervisor)

……

Date

(iii) Declaration: This page spells out oath and confirmed by author's signature to clarify that this is the original work. For example:

DECLARATION

1, **Mussa Jamal Mussa,** do hereby declare that this project report is my own original work and that it has not been presented and will not be presented to any other college for a similar or any other diploma award.

……..

Signature

……..…

Date

(iv) Statement of Copyright: Copyright is just right to copy a written work. It is the page in research report containing information about protection of the

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work. This right prevent others from replicating report without author's consent. The protection of copyright is under the national and international conventions of copyright. Example of copyright:

COPYRIGHT

This project report is protected by national and international copyright. No part of this work may be reproduced, stored in any retrieval system, or transmitted in any form by any means or otherwise without a written prior permission of the author or Zanzibar Muslim College on behalf of the author.

(v) Acknowledgement: On this section, author expresses his gratitude to those who have assisted him in one way or another to complete his study. This may include the institutions, supervisor, tutors, fellow students, relatives, friends and many others. Example of acknowledgement:

ACKNOWLEDGEMENT

First of all, my sincere appreciation to Allah Almighty who has delivered all that was required to comprehensive this work and the program for which it was take on for.

My sincere appreciation also goes to my supervisor …… whose contribution and constructive criticism has push myself to spend the sympathetic of energies I have employed to create this work as new as it can be. Thanks to him I have practiced exact study and my awareness on the topic has been enlarged.

My utmost regard also goes to my mothers and father, who conscientiously placed the groundwork for my learning giving it all it takes. …….

Finally, my distinctive appreciations go to all questionnaires respondents for taking their time to respond my questionnaires and all in one way or another provide their contributions on the completion of this research project.

(vi) Dedication: A dedication for research report is usually the short expression in the preliminary pages. In this page, the author mentions every name and relation which inspired them to complete the study. The author can dedicate his work to anyone know both personally and professionally. Example of dedication page:

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DEDICATION

This work is dedicated to my family; especially my son …… and daughter …. to be catalyst of their educational development.

or

I dedicate this work to my parents; my father, Mr…….. and my mother, Mrs. ……. for their valuable support.

(vii) Table of contents: is an organised listing of chapters and major sections of research report. This page(s) indicate where the various sections and subsections can be found using page numbers. This can be generated automatically from the text or prepared manually. The list of tables, figures and illustrations should be included on a separate page and arranged in the same format as the Table of Contents. Example of table of contents:

TABLE OF CONTENTS

(viii) Abbreviations: is a shortened form of a word or phrase. It may also consist of initials only, a mixture of initials and words or words and letters representing words in another language. In research report, this section indicates all abbreviations written in the research report and should be included in the list of abbreviations. Example:

ABBREVIATIONS

MOEVT	Ministry of Education and Vocational Training
DPE	Diploma in Primary Education

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ECD	Early Childhood Development
DSE	Diploma in Secondary Education
STDs	Sexual Transmitted Diseases
HIV	Human Immune Viruses
AIDS	Acquired Immune Deficiency Syndrome
TC	Teachers' College
CCK	Chuo Cha Kiislamu (Zanzibar Muslim College)

(ix) List of tables/figures (if any): List of tables consists of and diagram, map or graph that has been used to illustrate point in the research report. Also, list of figures is numerical information like sex, marks and so on used in research report. Example of list of tables:

LIST OF TABLES

Example of list of figures:

LIST OF FIGURES

(x) Abstract: An abstract is an overview that highlights all important aspects of the research including the research method, data collection process, and research findings. In other words, abstract is a summary of research report that clearly presents the problem, subjects, instruments, procedures basic results and major conclusion. Example of abstract:

ABSTRACT

This study was designed to explore the effects of irresponsible sexual behaviours among student teacher in Zanzibar. The study has three specific objectives, that are ….., ….. and ….. The study was conducted in Zanzibar Muslim College, Mazizini. The qualitative data approach was used and data was collected using questionnaire and focus group discussion. The sample of 80 respondents was used to represent the study population. Among the respondents were 70 student teachers, 7 tutors and 3 administrators. The results of the study depicts that irresponsible sexual behaviours have many effects. Those effects are ……., ……., ……, ……., ……. and ……...

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The study conclude that ……

2. MAIN BODY OF THE REPORT

The main body of the report should contain a comprehensive introduction and literature review; a statement of the research problem, objectives and hypotheses (or research questions); details of the methods used in the research, description and statistical analyses of the research data; discussion of the results and, where applicable, recommendations for further research. Generally, main body of the report is divided in to five major sections called chapters. Each chapter consists of sections and subsection as shown below:

1.0 Chapter One: Introduction

Here, the researcher highlights the aims and objectives of the systematic investigation as well as the problem which the systematic investigation sets out to solve. When writing the report introduction, it is also essential to indicate whether the purposes of the research were achieved or would require more work.

In the introduction section, the researcher specifies the research problem and also outlines the significance of the systematic investigation. Also, the researcher is expected to outline any jargons and terminologies that are contained in the research. The introductory chapter contains the following elements:

(i) Background
(ii) Statement of the problem
(iii) Purpose of the study
(iv) Specific objectives of the study
(v) Research questions
(vi) Significance of the study
(vii) Scope of the study
(viii) Organization of the report

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1.1 Background
1.2 Statement of the problem
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1.4 Specific objectives of the study
1.5 Research questions
1.6 Significance of the study
1.7 Scope of the study
1.8 Organization of the report

2.0 Literature Review

A literature review is a written survey of existing knowledge in the field of study. In other words, it is the section where you provide an overview and analysis of different research works that are relevant to your systematic investigation.

It highlights existing research knowledge and areas needing further investigation, which your research has sought to fill. At this stage, you can also hint at your research hypothesis and its possible implications for the existing body of knowledge in your field of study.

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