

**MOI UNIVERSITY.**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES.**

**DEPARTMENT OF HUMAN RESOURCE.**

**IRD 102.**

**COMMUNICATIONS SKILLS 2.**

**CAT 2 TAKE AWAY.**

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**SIGN:**

**QUESTION: DISCUSS THE PROCESS OF RESEARCH.**

Research in simplest terms is information seeking. However, research is not just about finding a piece of information. Instead, we can see research as a thorough examination of a topic. Research process includes locating information, reflecting on what you have learned, adapting your ideas, organizing thoughts into a logical order, and then using those sources and ideas to produce a project or come to a decision. Research comprises creative and systematic work undertaken to increase the stock of knowledge and the use of this knowledge to devise new applications. It is used to confirm facts, reaffirm the results of previous work, solve new or existing problems, support theorems or develop new theories. In a school setting research can be used to further a student’s research prowess to prepare them for future jobs or reports. The primary purposes of basic research as opposed to applied research are documentation, discovery, interpretation, or the research and development of methods and systems for the advancement of human knowledge. Approaches on research vary on epistemologies meaning (nature of knowledge, justification, and the rationality of belief).

Identify the problem or develop a research question. The research problem may be something the agency identifies as a problem, some knowledge or information is needed by the agency, or the desire to identify a recreation trend nationally. For example the agency may identify a problem as childhood obesity, which is a local problem and concern within the community. This serves as the focus of the study.

Review the literature. Now that the problem has been identified the researcher must learn about the topic under investigation. In order to achieve this researcher must review the literature related to the research problem. This step provides foundational knowledge about the problem area. Review of literature also educates the researcher about what studies have been conducted in the past, how these studies were conducted, and the conclusions in the problem area. In the obesity study, the review of literature enables the research to discover the statistics related to the long term effects of childhood obesity in terms of health issues, death rates, and projected medical costs. The information discovered during this step helps the researcher understand the magnitude of the problem, recognize the future consequences of obesity, and identify a strategy to combat the problem.

Clarification of the problem. Many times the initial problem identified in the first step of the process is too large or broad in scope. Here the researcher clarifies the problem and narrows the scope of the study. This can only be done after the literature has been reviewed. The knowledge gained through the review of literature guides the researcher in clarifying and narrowing the research project. In our case the researcher has identified childhood obesity as the problem and the purpose of the study. The topic is very broad and could be studied based on genetics, family environment, diet, exercise or health issues. All of these areas cannot be investigate in a single study; therefore the problem and purpose of the study must be more clearly defined. By narrowing done the research is more narrowly focused and researchable than the original problem.

Clearly define terms and concepts. Terms and concepts are words or phrases used in the purpose statement of the study or the description of the study. These items need to be specifically defined as they apply to the study. Terms or concepts often have different definitions depending on who is reading the study. To minimize confusion about what the terms and phrases mean, the researcher must specifically define them for the study. In the obesity study, the concept of “individual’s health” can be defined in hundreds of ways, such as physical, mental, emotional, or spiritual health. For this study, the individual’s health is defined as physical health. By defining the terms or concepts more narrowly, the scope of the study is more manageable, making it easier to collect the necessary data for the study. This also makes the concepts more understandable to the reader.

Definition of the population. Research projects can focus on a specific group of people, facilities, park development, employee evaluations, programs, financial status, marketing efforts, or the integration of technology into the operations. For example, if a researcher wants to examine a specific group of people in the community, the study could examine a specific age group, males or females, people living in a specific geographic area, or a specific ethnic group. Literally thousands of options are available to the researcher to specifically identify the group to study. The research problem and the purpose of the study assist the researcher in identifying the group to involve in the study. In research terms, the group to involve in the study is always called the population. Defining the population assists the researcher in several ways. First, it narrows the scope of the study from a very large population to one that is manageable. Second, the population identifies the group that the researcher’s efforts will be focused on within the study. This helps ensure that the researcher stays on the right path during the study. Finally, by defining the population, the researcher identifies the group that the results will apply to at the conclusion of the study. In our study we chose the population of the study as children ages 10 to 12 years.

Development of instrumentation plan. The plan for the study is referred to as the instrumentation plan. The instrumentation plan serves as the road map for the entire study, specifying who will participate in the study; how, when, and where data will be collected; and the content of the program. This plan is composed of numerous decisions and considerations. In the obesity study, the researcher has decided to have the children participate in a walking program for six months. The group of participants is called the sample, which is a smaller group selected from the population specified for the study. The study cannot possibly include every 10- to 12-year-old child in the community, so a smaller group is used to represent the population. The researcher develops the plan for the walking program, indicating what data will be collected, when and how the data will be collected, who will collect the data, and how the data will be analyzed. The instrumentation plan specifies all the steps that must be completed for the study. This ensures that the researcher has carefully thought through all these decisions and that there is a step-by-step plan to be followed in the study.

Collection of data. Once the instrumentation plan is completed, the actual study begins with the collection of data. The collection of data is a critical step in providing the information needed to answer the research question. Every study includes the collection of some type of data, whether it is from the literature or from subjects, to answer the research question. Data can be collected in the form of words on a survey, with a questionnaire, through observations, or from the literature. The researcher collects these data at the first session and at the last session of the program. These two sets of data are necessary to determine the effect of the walking program on weight, body fat, and cholesterol level. Once the data are collected on the variables, the researcher is ready to move to the final step of the process, which is the data analysis.

Data analysis. All the time, effort, and resources dedicated to steps 1 through 7 of the research process culminate in this final step. The researcher finally has data to analyze so that the research question can be answered. In the instrumentation plan, the researcher specified how the data will be analyzed. The researcher now analyzes the data according to the plan. The results of this analysis are then reviewed and summarized in a manner directly related to the research questions. In the obesity study, the researcher compares the measurements of weight, percentage of body fat, and cholesterol that were taken at the first meeting of the subjects to the measurements of the same variables at the final program session. These two sets of data will be analyzed to determine if there was a difference between the first measurement and the second measurement for each individual in the program. Then, the data will be analyzed to determine if the differences are statistically significant. If the differences are statistically significant, the study validates the theory that was the focus of the study. The results of the study also provide valuable information about one strategy to combat childhood obesity in the community.

**Reference.**

1. Wikipedia.
2. www.humankenetics.com.