

## **Lesson n°8: Research Methodology and Design**

### **I. Introduction**

The terms research design and research methodology are often used interchangeably, leading to confusion, especially among emerging researchers. Therefore, it is important to clarify their meanings to ensure proper usage.

### **II. What is Research?**

Research is a planned and systematic activity aimed at discovering new facts and information about a particular phenomenon. The research process involves identifying a specific problem or area of interest, translating that into a research question, gathering data, analyzing the data, and then reporting the findings.

### **III. Research Design**

According to Kerlinger (1957), research design refers to the blueprint or plan for a study, outlining how the study will be conducted. The goal of a sound research design is to provide credible and reliable results.

### **IV. Research Methodology**

Research methodology refers to the principles, procedures, and strategies used in a particular approach to inquiry (Schwarzer, 2007). It encompasses the theoretical framework that guides the methods chosen by the researcher.

### **V. The Research Process**

The research process involves several crucial steps that must be considered and reviewed before initiating a study. These include understanding the orientation of the researcher, selecting an appropriate research approach, choosing suitable research strategies, establishing timelines, and determining the data collection techniques to be used.

## VI. Research Approaches

### 1. Quantitative Approach:

The primary aim of the quantitative approach is to transform variables into measurable data that can be analyzed statistically. This approach is valuable for exploring relationships between different variables and provides results that are often seen as reliable and objective.

### 2. Qualitative Approach:

While quantitative methods are widely recognized for their reliability, qualitative approaches are essential for understanding deeper insights. According to Novikov and Naulzov (2013), there is a belief that both qualitative and quantitative approaches complement each other, as qualitative data often provide context and depth that numbers alone cannot capture.

### 3. Mixed-Method Approach:

The mixed-method approach involves integrating both quantitative and qualitative data within a single study. This approach is useful when quantitative data alone are insufficient and need to be supplemented with qualitative insights to gain a fuller understanding of the research problem.

## VII. Triangulation:

Triangulation is the use of two or more data collection methods within the same study. This strategy is often employed to enhance the validity and credibility of research findings by ensuring that the results are consistent across different methods, thereby minimizing biases.