

PRIMER

RESEARCH BASED DECISION MAKING FOR STAFF OFFICERS

COLLEGE OF DEFENCE MANAGEMENT

Introduction

1. College of Defence Management is the nation's centre of excellence in defence management studies. The aim of this premier institution is to propagate contemporary management thoughts among Armed Forces officers in order to enhance operational effectiveness of the Armed Forces particularly when the nature of conflict is undergoing a paradigm shift with the hitherto accepted principles of war being constantly challenged. The College is nominated as Chair of Excellence for promoting the understanding and practice of Research Methodology in the Armed Forces. Keeping same in view, Research as a subject is being covered in the curriculum of the courses run at the college to develop research based decision making by the officers of Armed forces.

2. The MDP on Research Methodology has been introduced from training year 2022-23 for mid-level Defence Officers of the rank of Lt Col / Col and their equivalent in Navy and Air Force with a view to expose the participants to contemporary research concepts and associated techniques so as to offer them an opportunity to expand their cognitive horizons on aspects related to management in the Armed Forces.

Aim

3. The aim of this primer is to orient participants towards the scope of coverage of subject content of MDP on Research Methodology and the intended outcomes post undergoing the programme.

Learning Objectives

4. To acquaint the participants with the concepts Research and to create awareness about laid down Research Processes for efficient decision making.

Terminal Objectives

4. The terminal objectives of the MDP are as follows: -

(a) Enhance awareness through an exposure to contemporary concepts in Research Methodology.

(b) Augment decision making capabilities through research in practice,

systems approach, quantitative as well as qualitative techniques and techniques of Data Analysis (qualitative as well as quantitative).

Enabling Objectives (EO)

5. Participants should be able to: -
 - (a) Understand the concept and characteristics of Qualitative Research Process.
 - (b) Understand the concept and characteristics of Quantitative Research Process.
 - (c) Understand the differences between Quantitative and Qualitative Research.
 - (d) Understand the Mixed Methods Research.
 - (e) Understand the techniques of Data Analysis -qualitative as well as quantitative.

Methodology of Conduct of Course

5. The course is designed for a capacity of 40 officers of the rank of Lt Col / Col of Indian Army and their equivalent. The pedagogy of teaching at the College is dynamic with focus on participative and interactive learning, for a productive and intellectually stimulating learning experience. The teaching faculty has Directing Staff (DS) who moderate the discussions to arrive at appropriate lessons. The subject content would be imparted in the form of lectures, discussions, guest lectures as well as experiential learning through Peer Learning. The course curriculum would run from Monday to Saturday from 0830 H to 1430 H.

Academic Coverage

6. The aim of the MDP is to promote the practice of research tools and create awareness about laid down Research Process amongst the officers of Armed Forces for efficient decision making. During the conduct of the course, the participants will be given exposure on appropriate Research processes to be practiced in Armed Forces, for policy designing and problem solving (course content attached as appendix). The MDP includes following:-

- (a) **Deciding research problem.** Research Fundamentals, which includes what is Research, Scientific method and Types of Research. Research Strategy, which includes Definition, Types and Criteria for Selection.
- (b) **Research Process.** The sub module includes Quantitative Research, its steps and characteristics and Qualitative Research, its steps and characteristics as well as difference between Quantitative & Qualitative Research.

(c) **Deciding What to Research.** This chapter includes Research Problem, its Salient Aspects, steps in formation as Research and Problem Formulation. Review of Literature (ROL), why is it important and its Process. Formulation of Hypothesis, what is hypothesis, how is it formulated and Types of Hypothesis.

(d) **How to Plan For Research.** Research Design (RD), what is RD, components of RD and types of RD (Correlation Design, Svy Design & Observation Design). Data Collection, Types of Data and Methods of data Collection.

(e) **Questionnaire Design & Quantitative Data Analysis.** Questionnaire Design, what is Questionnaire, types of Questions and Attitude Measurement. Descriptive statistics, Demographics, Construct Score, Graphs and Charts, MCTD and concept of Inferential Statistics..

(f) **Interview Technique & Qualitative Data Analysis.** Interview Technique, Interview Types, Interview Guide and Conduct. Qualitative Data Analysis, Methods - Thematic Analysis & Content Analysis, what is Thematic Analysis, how to conduct Thematic Analysis and Content Analysis.

(g) **Evaluation of Research.** Concept of Validity & Reliability and Research in Practice.

(h) **Systems Analysis.** This module would give a preliminary exposure to basic concepts of Systems Analysis and Thinking which could enable the participants to identify and define problems.

Knowledge Enrichment and Experiential Learning

7. The participants undergoing the course would further be enriched by Guest Lectures of topical interest.

Suggested Pre-Course Reading

8. Reading of the following resources is recommended to enable participants to be better prepared to undergo the course: -

<u>Ser No</u>	<u>Reference</u>	<u>Author</u>
(a)	Foundations of Behavioral Research	Fred N Kerlinger,
(b)	Research Methodology : A step-by-step guide for beginners, 3 rd Edition	Ranjit Kumar
(c)	Research Design: Quantitative, Qualitative and Mixed Methods Approaches, 5 th Edition	John W Creswell
(d)	Social Science Research: Principles, Methods & Practices	Anol Bhattacharjee
(e)	Handbook on Research	CDM

Assimilation Ex

9. An 'Assimilation Exercise' will be conducted at the end of the programme which would be graded to gauge the level of assimilation by the participant officers. Officers standing First and Second in the Ex would be awarded prizes.

Conclusion

19. The College of Defence Management remains committed to the mission of providing quality education and professional knowledge to officers participating in the MDP on Research Methodology so that military leadership can benefit from your knowledge and sound understanding of contemporary management concepts and associated techniques that can be effectively leveraged for enhanced operational effectiveness of the Armed Forces.

MDP ON RESEARCH METHODOLOGY : COURSE CONTENT

Intro To Research

1. **Research Fundamental**
 - What is Research?
 - Scientific method
 - Types of Research
2. **Research Strategy**
 - Definition
 - Types
 - Criteria for Selection.
3. Types of Data, Scales of Measurement & Factors

Research Process

4. **Quantitative Research**
 - Steps
 - Characteristics
5. **Qualitative Research**
 - Steps
 - Characteristics
6. Difference between Quantitative & Qualitative Research

Defining the Problem

7. **Problem Formulation**
 - Salient Aspects
 - Steps
 - Problem Formulation
8. **Review of Literature (ROL)**
 - What is ROL?
 - Why is it important?
 - Process

9. Formulation of Hypothesis

- What is Hypothesis?
- How is it formulated?
- Types of Hypothesis

Planning to Address the Problem/ Generate Options**10. Research Design (RD)**

- What is RD?
- Components of RD
- Types of RD - Correlation Design, Svy Design & Observation Design

11. Data Collection

- Types of Data
- Methods of data Collection

Questionnaire Design & Quantitative Data Analysis**12. Questionnaire Design**

- What is Questionnaire?
- Types of Questions.
- Attitude Measurement

13. Descriptive statistics

- Demographics
- Construct Score
- Graphs and Charts
- MCTD

Quantitative Data Analysis**14. Concept**

- Sample Selection
- Statistical Estimation

Interview Technique & Qualitative Data Analysis**15. Interview Technique**

- Interview Types & Interview
- Interview Guide
- Conduct

16. Qualitative Data Analysis

- Methods - Thematic Analysis & Content Analysis
- What is Thematic Analysis?
- How to conduct Thematic Analysis?
- Content Analysis

Evaluation of Research

- 17. Writing of report
- 18. Validity & Reliability
- 19. Research in Practice

Project Work - 05 Sessions