ISBN: 978-93-92568-78-7

# **Introduction to** Research **Methodology in Education**



Dr. Divya Sharma Dr. Roli Tiwari

## Introduction to Research Methodology in Education

#### **Editors**

#### Dr. Divya Sharma

ICSSR Post-Doctoral Fellow
Chairperson, Veetraga Research Foundation
Assistant Professor, Department of Education
Vipra Arts, Commerce and Physical Education College
Raipur, Chhattisgarh

#### Dr. Roli Tiwari

Member of Advisory Board, Veetraga Research Foundation, Raipur ICSSR Doctoral Fellow,
Assistant Professor (Guest),
School of Studies in Psychology,
Ex-Faculty, Institute of Teacher Education,
Pt. Ravishankar Shukla University, Raipur, Chhattisgarh, INDIA



Publisher: **Aditi Publication,** Raipur, Chhattisgarh, INDIA

# **Introduction to Research Methodology** in Education

Year : **2024** Edition - **02** 

**Dr. Divya Sharma**Raipur, Chhattisgarh, INDIA **Dr. Roli Tiwari**Raipur, Chhattisgarh, INDIA

ISBN: 978-93-92568-78-7

#### Copyright<sup>®</sup> All Rights Reserved

No parts of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, mechanical, photocopying, recording or otherwise, without prior written permission of original Editor's.

Price: Rs. 699/-

Publisher & Printed by : **Aditi Publication**,

Opp. New Panchajanya vidya Mandir, Near Tiranga Chowk, Kushalpur, Raipur, Chhattisgarh, INDIA +91 9425210308

### CONTENTS

Chapter	Perticular	P.N.
01.	Concept of Educational Research Dr. Divya Sharma, Dr. Roli Tiwari	01
02.	Meaning, Nature, Need, Importance and Scope of Educational Research  Dr. Iti Banerjee	06
03.	Scientific Inquiry and Theory Development -Some Emerging Trends in Research Mrs. Bhawana Kshatriya	25
04.	Areas of Educational Research and Different Source of Generating Knowledge Dr. Shweta Mahakalkar	40
05.	Research Proposal  Dr. Shraddha Verma	46
06.	Types of Educational Research  Dr. Monika Chaube	52
07.	Qualitative and Quantitative Methods of Educational Research Mrs. Ratri Lahri	67
08.	Research Problems, Variables and Hypotheses  Dr. K Nagamani	73

09.	Population and Sampling <b>Dr. Sanjivani Thakur</b>	93
10.	Purpose and Need of Review of Related Literature at Different Stages of Research and Sources of Literature <b>Dr. Kavita Verma</b>	103
11.	Tools and Techniques of Educational Research <b>Dr. Pragati Dubey</b>	116
12.	Qualities of a Good Measuring Tool and Standardization Procedure Dr. Savita Saloman	137
13.	Collection of Data  Dr. Vani Tiwari	149
14.	Analysis and Interpretation of Data- NPC- Properties and Uses Skewness and Kurtosis Mrs. Gunjan Sharma	167
15.	Descriptive Statistics - Significance and uses of: Measures of Central Tendency - Mean, Median, Mode  Dr. Sonali Channawar	183
16.	Measures of Variability: Range, Quartile Deviation and Standard Deviation Mrs. Pratibha Khandelwal	205

17.	Measures of relative positions: Quartile, Deciles, Percentile and Percentile Rank, Standard Scores and T-scores Mrs. Prachi Vaidya	220
18.	Correlation - Concepts, Types and Uses; Assumption and Uses of Rank Difference, Computation of Rank Difference, Correlation and Product Moment Method Mrs. Gunjan Sharma	229
19.	Correlation: An Overview <b>Dr. Khushbu Diwan</b>	244
20.	Regression and Prediction  Dr. Swati Srivastava	271
21.	Inferential Methods- Concepts of Parameter Statistic, Sampling Distribution, Sampling Error and Standard Error <b>Dr. Divya Sharma, Dr. Roli Tiwari</b>	280
22.	Levels of Significance, Confidence, Limits and Intervals, Degree of Freedom, Types of Errors - Type I, Type II; tests of Significance of Mean and of Difference Between Means (both large and small samples) One and Two Tailed Tests Dr. Swati Srivastava	292
23.	Parametric Statistics & Non-Parametric Statistics  Dr. Padma Bohre	299

24.	Research Report	318
	Dr. Padma Bohre	
25.	Characteristics of a Good Research Report <b>Dr. Shraddha Verma</b>	326
26.	APA Style Referencing  Dr. Mini Pille	334



Dr. Divya Sharma



Dr. Roli Tiwari



Dr. Iti **Banerjee** 



Mrs. Bhavana Shatriya



Dr. Shweta Mahakalkar



Dr. Shraddha Verma



Dr. Monika Chaube



Mrs. Ratri Lahari



Dr. K. Nagmani



Dr. Sanjeevani **Thakur** 



Dr. Kavita Verma



Dr. Pragati **Dubey** 



Dr. Savita Saloman



Dr. Vani Tiwari



Mrs. Gunjan Sharma



Dr. Sonali Channawar



Mrs. Pratibha Mrs. Prachi Khandelwal



Vaidya



Dr. Khushbu Diwan



Dr. Swati Shrivastava



Dr. Padma Bohre



Dr. Mini Pille



Aditi Publication

Opp. New Panchjanya Vidya Mandir, Near Tiranga Chowk, Kushalpur, Dist.- Raipur-492001, Chhattisgarh shodhsamagam1@gmail.com, +91 94252 10308



₹ 699