



Seven-Day Workshop
on
Research Methodology in Behavioral and Social Sciences

Organised by

Department of Education

in association with

Centre for Disability Studies & Educational Research (CDSER)

School of Education

NETAJI SUBHAS OPEN UNIVERSITY

2nd - 8th February 2023

School of Education, Regional Centre, Kalyani, NSOU

Report prepared by

Ph.D. Research Scholars
Department of Education
SoE, NSOU

REPORT

Workshop File:

Date: 2nd – 8th February, 2023

Venue: School of Education, Regional Centre, Kalyani, NSOU

Mode: Face to face

Participants: 34 (Female – 10, Male - 24)

Nature of Participants: PG students, Ph.D. scholars, faculties

Background of the Workshop:

The workshop intends to provide an overview of the researches in behavioral and social sciences- quantitative qualitative and mixed research methods, assist immersion in specific techniques, and engage the participants with the key debates in the area, including those that argue on the essential unity of the logic of inference across research methods, research ethics, technology in research etc. The workshop will also introduce the participants to the key texts in the area of thematic focus, and introduce them to the approach of research methods, specific tools, and techniques of data organization, analysis and publication ethics. It will also create computer-based experience on software applications in data analysis. *Under the kind patronage of Prof. Ranjan Chakrabarti, Hon'ble Vice Chancellor, NSOU, the 7-day workshop was conceived and organized.*

Objectives of the Workshop:

The workshop was expected to provide a hand-holding on-

- Understanding the various concepts of research in Behavioral and Social Sciences
- Orienting with the approaches of research, tools and techniques, designs, organization and analyses of data
- Inculcating the process of tool standardisation, sampling procedures and analysis techniques
- Thorough exposure on the application of statistics in Behavioral and Social Science research
- Sensitizing on the research ethics and publication misconducts
- Briefing and tuning on the application of technology in research

Methodology: The workshop was carried out through deliberation, discussion, presentation, group activities and assessment through Google Forms at the end of each day through asynchronous mode in the dedicated WhatsApp Group of the workshop.

PROCEEDINGS OF THE WORKSHOP

Day-1 (2nd February, 2023 Thursday)

Inaugural session

In the Inaugural Session, Dr. A. N Dey, Director, SoE, NSOU welcomed the esteemed participants and set the tenor of the workshop. He emphasized on creation of 'competent human resources. Dr. Papiya Upadhyay, Assistant Professor & Workshop Coordinator, SoE, NSOU fortified the theme and activities of the workshop with her elucidative speech. She stressed on academic integrity during her deliberation. Prof. Debjani Guha, HoD, Department of Education, University of Kalyani in her inaugural Address enunciated on multi-method eclecticism in research. She also congratulated NSOU and the whole organising committee for taking this type of invaluable initiatives. Mr. Chitresh Biswas, MSME Development & Facilitation Office, GoI, Ministry of MSME, Kolkata addressed the challenges of data collection process for the social scientist and heartily appreciated this initiative. Mr. Satinath Mukhopadhyay, MSME Development & Facilitation Office, GoI, Ministry of MSME, Kolkata in his address highlighted the cross functional nature of research and application of 6 sigma approach along with DMAIC principles. Special Guest Prof. Sanat Kumar Ghosh, Former Dean, RBU & Former Prof, NSOU emphasized on multidisciplinary approach of research in behavioural and social sciences. Dr. Parimal Sarkar, Assistant Professor & Jt. Workshop Coordinator, SoE, NSOU proposed the vote of thanks.

Session – I: Nature of Scientific Methods and its Application to Social Phenomenon

Prof. Sanat Kr. Ghosh, facilitated the session. He resourcefully deliberated his expertise views regarding characteristics of scientific research in education as well as behavioural and social sciences. He beautifully portrayed corollaries of social science research. He also narrated the paradigm of educational research. He clearly distinguished assumption, proposition, construct and variable in his deliberation. He also focused on approaches, attributes, types, and limitations in research. The session opened the gateway of deep knowledge and further discussion regarding scientific research in social sciences.

Session – II: Types of Research: Historical, Analytical, Interdisciplinary, Evaluative, Participative and Action Research

Prof. Nimai Chand Maiti, SoE, NSOU introduced different types of research. He briefly explained the concept and characteristics of historical, analytical, interdisciplinary, evaluative, participative and action research. He also addressed the advantages, disadvantages and applicability of each research strategies vividly. An active interaction with the participants made the session effective and successful.



Day-2 (3rd February, 2023 Friday)

Session – I: Application of statistics in social science research: Inferential statistics - parametric statistics (Software applications)

In this session Mr. Mrinal Nath, School of Sciences, NSOU discussed hypothesis testing as an integral part of the research process, especially in quantitative data analysis. In the beginning of his demonstration, he threw light upon the preliminary concepts related to hypothesis testing which includes concept related to population, sample, and sampling distribution with his illustrious detailing through PPT. Another notable concept that he focussed on was "Law of Large Numbers". Apart from this he gave ample examples on how hypothesis testing is done. He discussed how the research process in case of quantitative study begins with setting up the null hypothesis and thereby testing it with the data collected through several data collection tools and techniques. Later on, he provided several illustrations for correlation analysis and explained it with utmost expertise.

Session – II: Application of statistics in social science research: Inferential statistics - non-parametric statistics (Software applications)

In the 2nd session, Mr. Nirmal Nath discussed Non-Parametric Statistics. The session was continued with demonstration on step-by-step procedure for data inputs in data view, variable

view. He also demonstrated how to export data from existing data source in excel sheet. He guided the participants how to analyse data using different options under analyse menu. Last but not the least, the participants were provided with hands-on experience on the statistical package, SPSS, for quantitative data analysis.

Session – III: Research Metrics-Assessing Research Impacts

The third session was conducted by Prof. Anirban Mukhopadhyay, Dept. of Computer Science & Engineering, and University of Kalyani, where he discussed about Research Metrics. First he gave a detailed overview off Research Metrics, its usage and types. Then he moved on to categories of research metrics where he talked about Web of Science and Scopus. Several Web of Science metrics were discussed by Dr. Mukhopadhyay. He threw light on Journal Citation Reportes, Journal Impact Factors, 5-year Journal Impact Factors, Immediacy Index, Cited Half-life, Eigenfactor etc. He showed the calculation process of all these Research Metrics through ample examples beautifully presented through the PPT. Four Scopus Metrics namely Citescore, Scimago Journal Ranking (SJR), Source Normalized Impact Per Paper (SNIP) and Field- Weighted Citation Impact (FWCI) were discussed then. h-index, i-10 index and G-index- these three author level metrics were also discussed in detail. Dr. Mukhopadhyay clearly pointed out the advantages and disadvantages of these three Author Level Metrics after he taught the calculation process of each one. He ended the session with a brief discussion on Citation Metrics and Alternative Metrics.



Day-3 (4th February, 2023 Saturday)

Session – I: Application of statistics in social science research: Descriptive statistics

The session was facilitated by Prof. K. N Chattopadhyay, Dept. of Education, University of Burdwan. The session was started with some basic concepts of variables and measurement scales which accelerated the momentum of the session. Prof. Chattopadhyay extensively demonstrated the concept and types of descriptive statistics. He also highlighted the application and presentation of univariate and bivariate descriptive statistics. He also

Session – II: Procedure of making standardized tool

Professor Nimai Chand Maiti, School of Education, Netaji Subhas Open University expounded clearly the procedure of making standardized tools for research. He stated the different characteristics and components of a standardized tool in a detailed manner. He gave examples of different types of standardized tests and facilitated the participants in planning to construct a standardized test. The session was very informative and interactive with active participation from the participants' end.

Session – III: Qualitative Research Designs- Grounded Theory, Case Study, Ethnographical Perspective, Phenomenological Perspective and Ethno-methodological Perspective

Professor Sibaprasad De, School of Education, Netaji Subhas Open University extensively deliberated on Qualitative Research Design with special emphasis on Grounded Theory, Case Study, Ethnographical Perspective, Phenomenological Perspective and Ethnomethodological Perspective. He comprehensively discussed about qualitative research design drawing comparisons from various disciplines other than the social sciences. He also facilitated an activity session in which the participants were asked to form groups and each group had to come up with research topics related to different qualitative research designs. It was an interesting session with a combination of both theory and practice blended together.



Day-5 (6th February, 2023 Monday)

Session – I: Mixed-Method Research

Prof. Dibyendu Bhattacharyya, Professor of the Department of Education, University of Kalyani talked about 'Mixed-Method Research'. Mixed methods research has exploded in popularity within social research in the past 20-25 years. Quantitative research can give a broad picture based on a large sample, with a numeric analysis of data. On contrary, Qualitative research reveals stories, nuances, and experiences from fewer samples that help

us to restore how or why things have happened. He enumerated the key challenge of mixed-method research is to ensure that the integration of the qualitative and quantitative methods simultaneously makes sense. While positivist movements prepare the background of quantitative methods, post-positivist approaches generate the super-structure of qualitative approaches. While research objectives are satisfied by quantitative methods, research questions are satisfied by qualitative approaches. He has shown different designs of mixed-research methods such as parallel design, convergent design, multi-phase design, embedded design, etc., to draw inferences. He elaborately discussed what steps should be followed and what cautions should be kept in mind while implementing this method in our studies. He elaborated on the points with suitable examples he experienced in his prolonged research activities.

Session – II: Types of Research Design

In this session, Prof. D. Bhattacharyya beautifully conveyed the meaning, perspective, characteristics, and process of research design. Further, he elaborately discussed different types of research design and how qualitative research designs differ from quantitative research designs. He also focused on various types of quantitative research designs such as descriptive research design, types of diagnostic studies and their attributes, experimental designs, and their types, etc. While mentioning different research designs, he shared the valued experiences that he gathered. This session were indeed very thought-provoking, cognitively enriched, and effective sessions. Every stakeholder benefitted from it. The new trends in research methodology and mixed method research enlightened by him helps the newcomers in this field a lot.

Session – III: Concepts in Research: Review of literature, Limitation, Delimitation, Statement of problem, Operational definition etc.

The third session of the 5th day was verbalized by Dr. Parimal Sarkar, Assistant Professor, School of Education, Netaji Subhas Open University, on Review Literature and its associated paradigms such as the statement of problems, operational definitions, limitation, delimitation, etc. He asserted various types of review literature such as narrative literature review, and systematic literature review with the categorization of meta-analysis and meta-synthesis, etc. He briefly pointed out how the review of literature helps us to find the gaps, how to construct tools for the study, and how to use those references to draw inferences from the study. He highlighted that part of the study so well and constructive manner that every participant take

part in this session with utmost concentration. The most neglected portion of the research work through his presentation is presented as one of the most vital parts of the study, based on which the infrastructure of the whole study should be built. With practical examples from his research works, he makes students learn how to frame the title of the study in a more precise and appropriate way. Further, he focused on how the title of any study enlarges the scope of research. He cited different referencing tools and through live demonstration, he depicted the way how to use those Citation tools. He made us learn to use both ways of referencing techniques: manually and using referencing tools like Mendeley, Zotero, EndNote, etc. This live session engrossed participants' attention more. Again, he referred to APA 6th and 7th versions for a better understanding of the whole process. The most facilitating part of this session is hand-holding process for a better understanding of participants and to attain the objective of the session. The participants are divided into three groups and each group was assigned a title. Each group had to point out the flaws or appropriateness of the assigned title, limitations, and delimitations that they understand from the title. Learning by doing approach of Dr. P. Sarkar ensures a deep understanding of the whole process of reviewing the literature among participants.



Day-6 (7th February, 2023 Tuesday)

Session – I: Steps in the Process of Research

The first session of 7th day workshop was facilitated by Prof. Sanat Kumar Ghosh, former dean, faculty of arts, Rabindra Bharati University. Prof. Sanat Kumar Ghosh talked about steps in the process of research on research and behavioural science. He explained that the research process consists of a series of systematic procedures that a researcher must go through in order to generate knowledge. To conduct effective research, the researcher must understand the research process steps and follow them. He briefly discussed the major steps in the process of research.

Session-II: Thorough exposure to data (both qualitative and quantitative) analysis techniques

Prof. Sanat Kumar Ghosh discussed the session with snap recap of the research methodology and behavioural science workshop held earlier and ensured that all participants are sensitised a well understand on the steps of research process. Further he elaborately explained qualitative and quantitative data analysis techniques. Qualitative data analysis is the process of organising, analysing and interpreting qualitative data-non-numeric, conceptual information and user feedback-to capture themes and patterns, answer research questions, and identifying actions to take to improve researcher’s findings. He also defined quantitative data analysis as the process of analyzing data that is number based or data that can easily be converted into numbers. He elaborately discussed descriptive statistics is mainly used for qualitative data analysis by interpreting mean, median, mode, standard deviation, kurtosis, graph, data transfer. He introduced a new term “Data Mining”-pool of data used as a secondary data for qualitative data analysis. He also focused on Inferential Statistics is used for quantitative data analysis through ratio scale and regression analysis. Prof. Ghosh introduced a ‘Model’ or path analysis to explain how quantitative data analysis is conduct in inferential statistics by using ANOVA, MANOVA, Factor Analysis, Cohort Study , Maximum difference analysis, Cluster analysis, SWOT analysis. He ended his session by differentiating two term Bibliography and Referencing.

Session – III: Concepts in Research: Variables, Attributes, Hypotheses, Research questions, Objectives

The third session was conducted by Prof. Bijan Sarkar, Department of Education, University of Kalyani, where he discussed about the basic concepts of research. Then he moved on to research related important terms like- Variables, Attributes, Hypotheses, Research Questions and Objectives. While discuss nature of research he introduced two new phrase “Boundary Breaking” and “Boundary Pushing”. He beautifully conveyed the concept of variables and its different types-independent variable, dependent variable, confound variable etc. Prof. Sarkar elaborate Construct-an attribute or characteristic expressed in a abstract, general way. An example of is Personality which is measured by MMPI-(MINNESOTA MULTIPHASIC PERSONALITY INVENTORY). He briefly pointed out Operational Definition and process of constructing a Hypothesis and its types.



Day-7 (8th February, 2023 Wednesday)

Session – I: Allotment of a small field study

Dr. Srabanti Choudhuri, Assistant Professor in Sociology, School of Social Sciences, NSOU facilitated the session. She focused on field and ethnographic studies in depth with her own expertise views and experiences. She addressed ethical issues and the organisational context of research. The session concentrated particularly on data collection, in-depth interviewing and in observation. She also addressed the challenges involved in interviewing the marginal groups and exploring the different ways in which research can be modified. She also portrayed some popular notable works in national and international level. She elaborately described the design and basic steps of field studies. She emphasized on insightfulness, receptivity, self-understanding as essential qualities of a field researcher. The interactive session was concluded with practice research as the means to an end, not and end in itself.

Session – II: Report writing and presentation

Dr. Papiya Upadhyay, Assistant Professor, School of Education, Netaji Subhas Open University vividly enunciated systematic aspects of report writing and presentation throughout the interactive and engaging session. She extensively described different kinds of publications with examples. The session was not only a one-way deliberation, but it was collaborative in nature with the active contribution of the participants. She guided the participants about how to plan and execute a reader-oriented academic writing with right title, concise abstract, right set of keywords, and appropriate introduction to format of references. She elaborately described the structure of a research paper or report. She also directed where to publish with details of review process. The session was concluded with writing tips including dos and don'ts guidelines which helps to carry you the participants to a long way.

Valedictory Session

The seven-day workshop was summarized by Prof. D.P. Nag Chowdhury, SoE, NSOU. It was followed by an end note by Prof. Anirban Ghosh, Director, Centre for Internal Quality Assurance (CIQA), NSOU; Dr. Premananda Jana Director, Regional Centre, Kalyani, NSOU. Few participants were invited to share their experiences. At the end participation certificates were distributed to all participants. This was followed by a group photograph. A feedback form was released in the dedicated Workshop WhatsApp group. The participants were requested to fill-out the google form and submit their responses. The entire seven-day workshop was skilfully coordinated by Dr. Papiya Upadhyay & Dr. Parimal Sarkar.





Participants' Feedback Analysis Report:

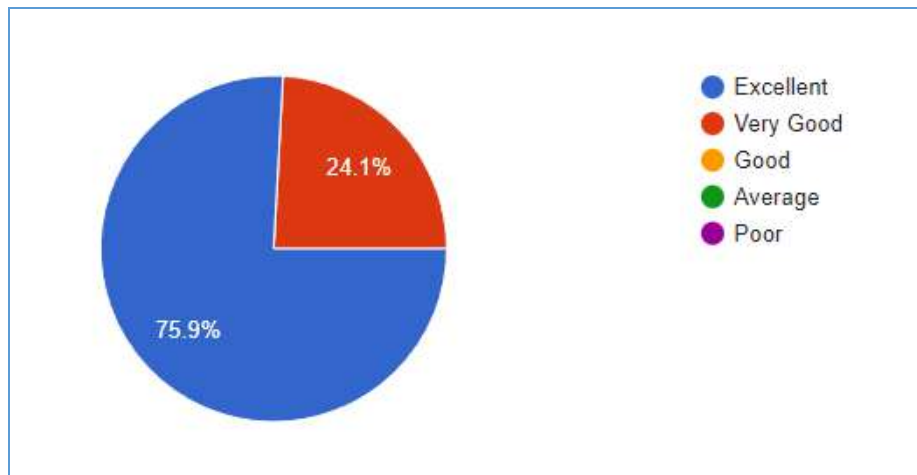


Figure-1: How would you rate the workshop as a need- based academic initiative?

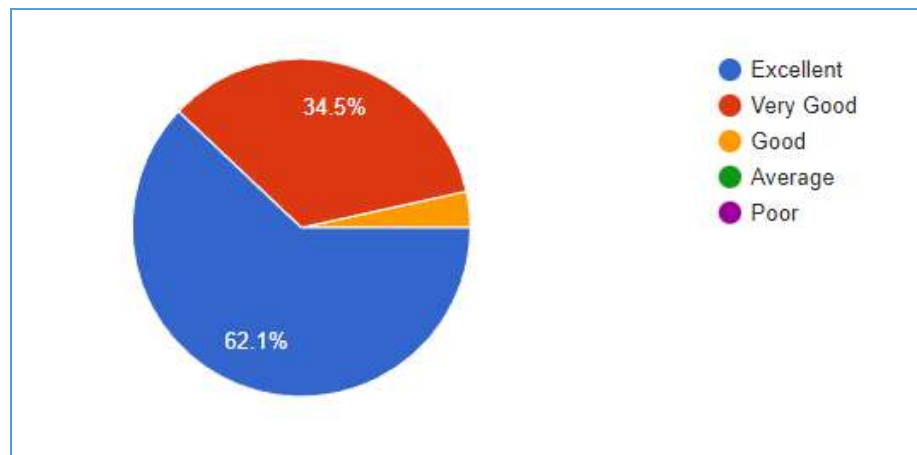


Figure-2: Were the objectives of the Workshop fulfilled through deliberation and presentation sessions? Rate your view

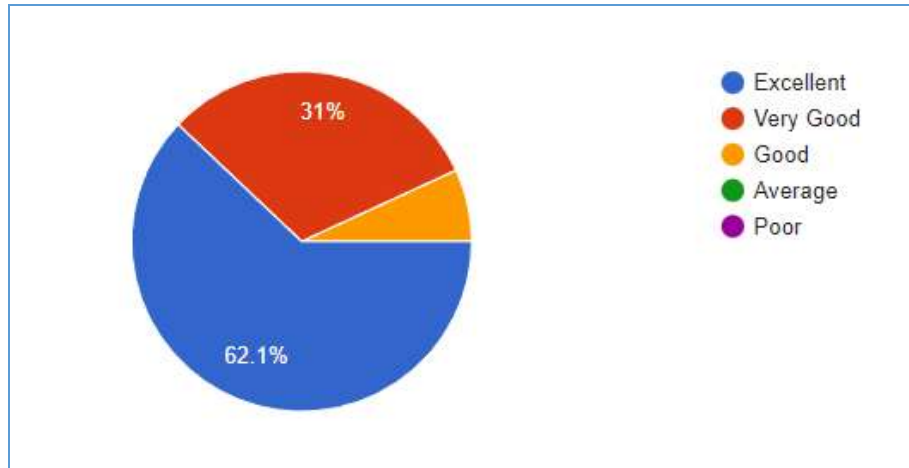


Figure-3: Rate the overall management of the workshop

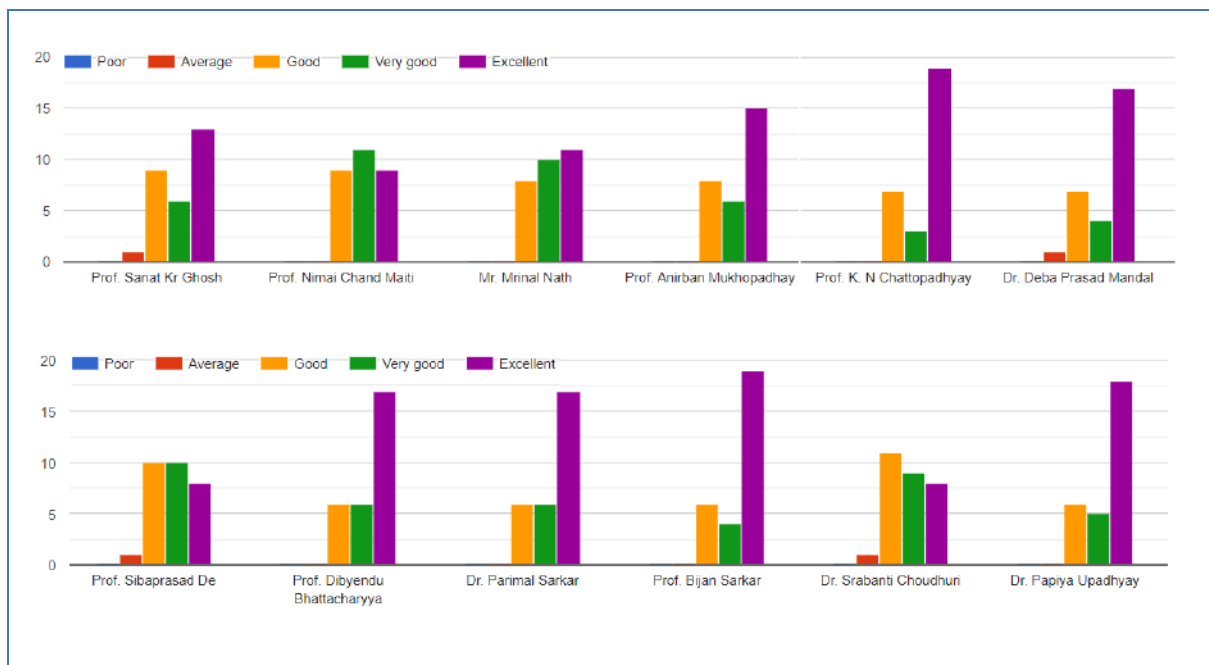


Figure -4: Rate the sessions deliberated by resource persons

Suggestions from the participants:

The feedback received were overwhelming to note. Collective suggestions are etched below:

- ✚ More sessions on Tool development and SPSS
- ✚ Hands-on opportunities
- ✚ Blended mode of conducting the workshop could be adopted in the future
- ✚ A diploma course on research methodology could be conceptualized
- ✚ More resource persons outside the state of West Bengal could be engaged for enrichment.

✚ Dedicated session on presentation by the participants

✚ Request for organizing more workshops on different areas of educational research in future

PROGRAMME SCHEDULE

Date	Time	Session/Topic	Resource person
2nd February, 2023 Thursday	10:30 am – 12:00 pm	INAUGURAL SESSION	
		➤ Welcome Address: Dr. A. N Dey, Director, SoE, NSOU	
		➤ About the Workshop: Dr. Papiya Upadhyay, Asst Prof & WC, SoE, NSOU	
		➤ Inaugural Address: Prof. Debjani Guha, HoD, Department of Education, University of Kalyani	
		➤ Address by the Chief Guest: Mr. D. Mitra, IEDS, Joint Director & Head of Office, MSME Development & Facilitation Office, GoI, Ministry of MSME, Kolkata	
		➤ Address by the Special Guest: Prof. Sanat Kumar Ghosh, Former Dean, RBU & Former Prof, NSOU	
		➤ Vote of Thanks: Dr. Parimal Sarkar, Asst Prof & WC, SoE, NSOU	
	12:00 pm – 01:30 pm	Session – I: Nature of Scientific Methods and its Application to Social Phenomenon	Prof. Sanat Kr Ghosh, Former Dean, RBU
	01:30 pm – 02:00 pm	Lunch	
	02:00 pm – 03:30 pm	Session – II: Types of Research: Historical, Analytical, Interdisciplinary, Evaluative, Participative and Action Research	Prof. Nimai Chand Maiti, SoE, NSOU
		Assessment (Google Forms)	
3rd February, 2023 Friday	10:30 am – 12:00 pm	Session – I: Application of statistics in social science research: Inferential statistics - parametric statistics (Software applications)	Mr. Mrinal Nath, School of Sciences, NSOU
	12:00 pm – 01:30 pm	Session – II: Application of statistics in social science research: Inferential statistics - non-parametric statistics (Software applications)	
	01:30 pm – 02:00 pm	Lunch	
	02:00 pm – 03:30 pm	Session – III: Research Metrics-Assessing Research Impacts	Prof. Anirban Mukhopadhyay, Dept. of Computer Science, University of Kalyani
			Assessment (Google Forms)
February, 2023 Saturday	10:30 am – 12:00 pm	Session – I: Application of statistics in social science research: Descriptive statistics	Prof. K. N Chattopadhyay, Dept. of Education, University of

	12:00 pm – 01:30 pm	Session – II: Population and Universe, Nature & Types of Sampling	Burdwan
	01:30 pm – 02:00 pm	Lunch	
	02:00 pm – 03:30 pm	Session – III: Research ethics and Publication misconduct; Open access publishing	Dr. Deba Prasad Mandal, Dept of Zoology WBSU
	Assessment (Google Forms)		
5th February, 2023 Sunday	10:30 am – 12:00 pm	Session – I: Various Tools and procedure of Data Collection	Prof. Nimai Chand Maiti, SoE, NSOU
	12:00 pm – 01:30 pm	Session – II: Procedure of making standardized tool	
	01:30 pm – 02:00 pm	Lunch	
	02:00 pm – 03:30 pm	Session – III: Qualitative Research Designs- Grounded Theory, Case Study, Ethnographical Perspective, Phenomenological Perspective and Ethno-methodological Perspective.	Prof. Sibaprasad De, SoE, NSOU
	Assessment (Google Forms)		
6th February, 2023 Monday	10:30 am – 12:00 pm	Session – I: Mixed-Method Research	Prof. Dibyendu Bhattacharyya, Dept of Education, University of Kalyani
	12:00 pm – 01:30 pm	Session – II: Types of Research Design	
	01:30 pm – 02:00 pm	Lunch	
	02:00 pm – 03:30 pm	Session – III: Concepts in Research: Review of literature, Limitation, Delimitation, Statement of problem, Operational definition etc.	Dr. Parimal Sarkar, SoE, NSOU
	Assessment (Google Forms)		
7th February, 2023 Tuesday	10:30 am – 12:00 pm	Session – I: Steps in the Process of Research	Prof. Sanat Kumar Ghosh, Former Dean. Faculty of Arts, Rabindra Bharati University & Former Prof, SoE, NSOU
	12:00 pm – 01:30 pm	Session-II: Thorough exposure to data (both qualitative and quantitative) analysis techniques	
	01:30 pm – 02:00 pm	Lunch	
	02:00 pm – 03:30 pm	Session – III: Concepts in Research: Variables, Attributes, Hypotheses, Research questions, Objectives	Prof. Bijan Sarkar, Dept of Education, University of Kalyani
	Assessment (Google Forms)		
8th February, 2023 Wednesday	10:30 am – 12:00 pm	Session – I: Allotment of a small field study	Dr. Srabanti Choudhuri School of Social Sciences, NSOU
	12:00 pm – 01:30 pm	Session – II: Report writing and presentation	Dr. Papiya Upadhyay, SoE, NSOU
	01:30 pm – 02:00 pm	Lunch	
	Feedback (Google Forms)		
	02:00 pm – 03:30 pm	VALEDICTORY SESSION Summary & Concluding Remarks Sharing of Experiences and Closing	

PARTICIPANTS LIST

Sl. No.	Name	Affiliation
1	Abhedananda Panigrahi	Netaji Subhas Open University
2	Amit Das	University of Kalyani
3	Antara Choudhury	Netaji Subhas Open University
4	Bhaskar Mondal	Bamanghata High School (H.S)
5	Chandan Das	University of Kalyani.
6	Debasish Sarkar	Ankurhati Klbria Gazi School (H.S.)
7	Dr. Jayanta Acharya	Hope Institute of Bengal
8	Firoj Al Mamun	University of Kalyani
9	Humayun Kabir Biswas	M.Phil Scholar at University of kalyani
10	Mosharaf Hossain Mondal	The University of Burdwan
11	Nilay Mondal	The University of Burdwan
12	Prabir Naskar	Netaji Subhas Open University
13	Pradipta Dey Sarkar	Jadavpur University
14	Priya Topno	Netaji Subhas Open University
15	Rahul Das	University of Kalyani
16	Sanchita Das	University of Kalyani
17	Sankar Bairagi	Ramakrishna Mission Sikshanamandira
18	Santanu Patra	Netaji Subhas Open University
19	Sardiya Sultana	Netaji Subhas Open University
20	Saswati Bandyopadhyay	Devnarayan Siksha Sansthan
21	Satyajit Das	Jadavpur University
22	Shantanu Saha	Netaji Subhas Open University
23	Somdyuti Rakshit	University of Kalyani
24	Sourav Rana	Seacom B.Ed College
25	Subhasree Pal	Netaji Subhas Open University
26	Subhendu Laha	Bagnan Teachers' Training College
27	Subrata Naskar	Netaji Subhas Open University
28	Suchismita Raypaul	University of Calcutta
29	Sudipta Malakar	NCTE
30	Suman Atta	The University of Burdwan
31	Suman Basu	The University of Burdwan
32	Swapna Deb	Netaji Subhas Open University
33	Tanusree Saha	Patulia Girls' High School
34	Tapas Jana	The University of Burdwan

Workshop Organising Committee:

- **Chief Patron:** Prof. Ranjan Chakrabarti, Hon'ble Vice Chancellor, NSOU
 - **Patrons:** Dr. A. B. Aich, Registrar & C. A. Sachin Ch. Kar, Finance Officer, NSOU
 - **Chairperson:** Prof. A. N. Dey, Director, SoE, NSOU
 - **Advisors:**
 - Prof. Anirban Ghosh, Director-CIQA, NSOU
 - Prof. D. P. Nag Chowdhury, SoE
 - Prof. N. C. Maiti, SoE
 - Prof. S. P. De, SoE
 - **Workshop Coordinators:**
 - Dr. Papiya Upadhyay & Dr. Parimal Sarkar, Asst Profs, SoE
 - **Members:**
 - All faculty members & Ph.D. research scholars of SoE
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