



Gujarat Technological University

School of Management Studies

A Report on

One-Day Workshop on “Data Analysis through Software”

Type of Event: Workshop

Date: 16th May, 2026

Time: 10:30 AM To 4:30 PM

Venue: Computer Lab, GTU-SMS.

Description:

A one-day workshop on “**Data Analysis through Software**” was organized with the objective of enhancing the research and analytical capabilities of participants by providing practical exposure to the Statistical Package for the Social Sciences (SPSS). The workshop was conducted by **Dr. Anju Pandey, Associate Professor, Narayana Business School, Ahmedabad**, an experienced academician and researcher with extensive expertise in quantitative research methods and statistical analysis.

The workshop was designed to cater to MBA (IB) postgraduate students for developing competency in data analysis for academic and industry-oriented research. In today's data-driven environment, statistical analysis has become an indispensable component of evidence-based decision-making. Researchers across management, commerce, economics, psychology, social sciences, healthcare, and engineering increasingly rely on statistical software to analyze data and derive meaningful insights. SPSS is among the most widely used statistical software packages because of its user-friendly interface, comprehensive analytical capabilities, and widespread acceptance in academic research. Participants were guided through each stage of the research data analysis process—from preparing raw data to interpreting statistical outputs—using real-life examples and sample datasets. Interactive discussions, practical exercises, and question-answer sessions enriched the overall learning experience. There were more than 55 students of MBA (International Business) have actively participated in the workshop.

Objectives of the Workshop

The workshop aimed to achieve the following objectives:

- To familiarize participants with the SPSS software interface and its applications in research.
- To develop understanding of data preparation techniques before statistical analysis.
- To explain the process of data coding and creation of research databases.
- To demonstrate methods of data cleaning and handling missing values.
- To provide practical knowledge of descriptive and inferential statistical techniques.
- To demonstrate cross-tabulation for categorical data analysis.
- To enable participants to perform hypothesis testing using appropriate statistical tools.

Session I: Introduction to SPSS and Data Coding

The first technical session focused on introducing participants to SPSS and its applications.

Overview of SPSS

The session covered:

- History and evolution of SPSS
- Importance of statistical software in research
- Areas where SPSS is widely used
- Advantages of SPSS over manual statistical calculations

Participants learned that SPSS supports:

- Data management
- Statistical analysis
- Graphical presentation
- Predictive analytics
- Report generation

Understanding the SPSS Interface

Dr. Pandey demonstrated the major components of SPSS including:

- Data View
- Variable View
- Output Window
- Syntax Window
- Chart Builder
- Pivot Tables

Participants learned how to:

- Create a new data file
- Save datasets
- Import Excel files

- Export outputs
- Navigate menus efficiently

Hands-on practice allowed participants to become familiar with the software environment.

Session II: Data Entry, Database Creation and Data Cleaning

Participants learned systematic data entry procedures.

Topics covered included:

- Creating questionnaires in SPSS format
- Entering survey responses
- Importing Excel datasets
- Editing observations
- Sorting data
- Splitting files
- Selecting cases
- Merging datasets

Participants practiced entering sample survey data and verifying entries.

Meaning of Data Cleaning

Data cleaning involves detecting and correcting errors before analysis.

Common problems discussed included:

- Missing values
- Duplicate records
- Outliers
- Typographical errors
- Incorrect coding
- Invalid responses

Methods of Data Cleaning

The session highlighted that reliable analysis is only possible when data quality is maintained.

Session-III Descriptive Statistics and Cross Tabulation

Participants learned methods for summarizing research data.

Topics included:

- Frequency distribution
- Mean
- Median
- Mode
- Standard deviation

- Variance
- Range
- Minimum and Maximum values

SPSS procedures demonstrated included:

- Frequencies
- Descriptive Statistics
- Explore

Interpretation of tables formed an important part of the discussion.

Cross-tabulation was introduced for analyzing relationships between categorical variables.

Applications

Examples included:

- Gender and Purchase Preference
- Age and Brand Loyalty
- Education and Employment Status

Participants learned:

- Row percentages
- Column percentages
- Expected frequencies
- Interpretation of contingency tables

The session also introduced:

- Chi-square Test of Independence

Practical exercises enabled participants to understand associations between variables.

Session-IV: Hypothesis Testing

A major portion of the workshop focused on hypothesis testing.

Dr. Pandey explained:

- Research hypothesis
- Null hypothesis
- Alternative hypothesis
- Level of significance
- Type I error
- Type II error

Participants understood the decision-making process based on p-values.

Feedback from Participants

Participants appreciated the workshop for its practical orientation and systematic coverage of the data analysis process.

Key observations included:

- The sessions were interactive and easy to understand.
- Practical demonstrations enhanced learning.
- Real-life research examples improved conceptual clarity.
- Hands-on exercises built confidence in using SPSS.
- The resource person explained complex statistical concepts in a simplified manner.
- Individual guidance during practical sessions was highly beneficial.

Conclusion:

The one-day workshop on “**Data Analysis through SPSS**” conducted by **Dr. Anju Pandey** proved to be an enriching and highly beneficial academic programme. The workshop successfully bridged the gap between theoretical understanding and practical application of statistical analysis. Beginning with an introduction to SPSS and progressing through data coding, database creation, data cleaning, normality testing, reliability analysis, cross-tabulation, descriptive statistics, and hypothesis testing, the programme provided participants with a structured and comprehensive learning experience.

The hands-on approach adopted throughout the workshop enabled participants to gain confidence in using SPSS for managing and analyzing research data. The emphasis on interpreting statistical outputs, selecting appropriate analytical techniques, and reporting findings strengthened participants' research capabilities and prepared them for conducting high-quality empirical studies.

Course Coordinator: Dr. Kaushal Bhatt, Associate Professor, GTU-SMS.



Gujarat Technological University School of Management Studies

(Accredited with A+ Grade by NAAC)

One Day Workshop on

'Data Analysis through Statistical Software'

with Eminent Speaker

Dr. Anju Dwivedi
Associate Professor,
Narayana Business School, Ahmedabad



 16th May, 2026 (Saturday)

 Computer Lab

 10:30 AM to 05:00 PM

Invitee
Dr. Rajesh Jain
Director - GSMS

Coordinator
Dr. Kaushal Bhatt
Associate Professor - GSMS

Locate us @ : GTU SMS, Academic Block-4, GTU Campus, Visat Gandhinagar Highway,
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