Government Commerce College
Sector-15, Gandhinagar
(Affiliated to Gujarat University)

Report on One Day State Level Conference
'Statistical Theory and Its Applications'
3rd February 2024

State level conference on '**Statistical Theory and Its Applications**' was jointly organized by State Quality Assurance Cell (SQAC) and Research Development Cell (RDC), Government Commerce College, Gandhinagar on 3rd February, 2024. The aim of the conference was to increase interest in the subject of statistics and its scope among the research scholars and students in the current time and getting information about statistical tools and techniques for research. The conference was organized under the guidance of Principal Dr. A. N. Sutaria, Convener Prof. Falguni Mesarwala, Statistics Department and Organizing Committee of Government Commerce College, Gandhinagar. The conference had registration of 90 participants from various institutions and colleges across the Gujarat. The dignitaries on the dias were Shri P. B. Pandya I. A. S., Director, Commissionerate of Higher Education, Gandhinagar, Dr. Neerja Gupta, Vice Chancellor, Gujarat University, Dr. M. G. Bhatt Principal of Government Science College Gandhinagar, Dr. Anupa Chauhan Principal of Government Arts College, Gandhinagar, Keynote Speaker Dr. B. B. Jani, Emeritus Professor from Gujarat University. The resource persons in the conference were Dr. M. N. Patel, Dr. A. C. Bhrahmbhatt and Dr. G. C. Patel from Gujarat University. The programme started with the welcome address by Dr. A. N. Sutaria, Principal of Government Commerce College, Gandhinagar.

The opening remarks and introduction of the program were given by Dr. A. N. Sutaria. He welcomed the dignitaries on the dais, including speakers, academicians, research scholars, and students. Dr. A. N. Sutaria highlighted the purpose of the conference, emphasizing that research scholars and students will become aware of the scope of statistics in various fields, such as Data Analyst, Data Scientist in multinational companies, Research Officer, Statistical Assistants, and Research Assistant etc.

Shri P. B. Pandya I. A. S., Director, Commissionerate of Higher Education, Gandhinagar, emphasized the need and importance of statistics in various sectors such as Agriculture, industry etc. He mentioned that statistics improve the transparency and accountability of policy making. He focused on the importance of statistics and the contribution of statistics to design and implement various polices and role in economic growth of country.

Dr. Neerja Gupta, Vice Chancellor, Gujarat University encouraged the audience to implement the statistics in real world. She gave several real life examples of probability, estimation, testing of hypothesis and forecasting techniques which were used in weather forecasting, soil testing, ancient time, etc. She motivated researchers for more quality research that contribute to enhance country's GDP.

The conference had expert talks on statistical theory and its applications and technical session for paper presentation.

Dr. B. B. Jani talked about Panel Data Analysis and covered Pooled Data, Micro Panel Data, Regression Models, practical applications of Dummy Variables Model, Random Effect Model, and assumption of Regression Models etc. One key focus was on Time Series modeling that helps in estimating and forecasting. The conference emphasized the importance of these statistical tools in providing a concise overview of complex datasets.

Dr. M. N. Patel discussed about the Statistical Estimation on Records that included Probability Distributions, Hypothesis Testing and Estimation. Emphasis was placed on real-world applications, showcasing how statistical methods play a crucial role in decision-making across various industries. Overall, the event provided valuable insights into the dynamic intersection of statistical theory and practical implementation.

Dr. A. C. Bhrahmbhatt talked about Applied Statistics, Estimation and Testing of Hypothesis. Moving forward, Inferential Statistics took center stage, showcasing how it enables us to make predictions and drew conclusions about populations based on sample data. The speaker illustrated hypothesis testing, confidence intervals, and regression analysis as powerful tools in this domain.

Dr. G. C. Patel discussed about Design of Experiment and its application in Bio-Statistics. He explained that how experimental design such as Factorial Designs and Fractional Factorial Designs are used to find significant combinations of various factors. The speaker highlighted the importance of robust experimental design and the interpretation of results.

The conference delved into the multifaceted and intricate realm of statistics and its versatile applications across various fields. Beginning with the fundamental principles of data collection and analysis, the speakers highlighted the significance of statistics in uncovering patterns, trends, and insights.

The applications of statistics were exemplified through real-world case studies, spanning fields such as finance, healthcare, and social sciences. Attendees gained valuable insights into how statistical methodologies contribute to informed decision-making, risk assessment, and policy formulation.

Attendees gained insights into advanced statistical methods, such as Bayesian statistics and machine learning applications. The event facilitated knowledge exchange among participants, fostering a deeper appreciation for the role of statistics in diverse fields. Additionally, discussions centered on emerging trends and challenges, promoting a forward-looking perspective within the statistical community. Overall, the outcome was a heightened awareness of the significance of statistical theory in shaping informed decision-making and problem-solving across various domains.

The conference concluded by underlining the dynamic nature of statistics, highlighting its evolving role in the era of big data and artificial intelligence. Participants left with a reinforced understanding of the pervasive impact and relevance of statistics in shaping a data-driven world.