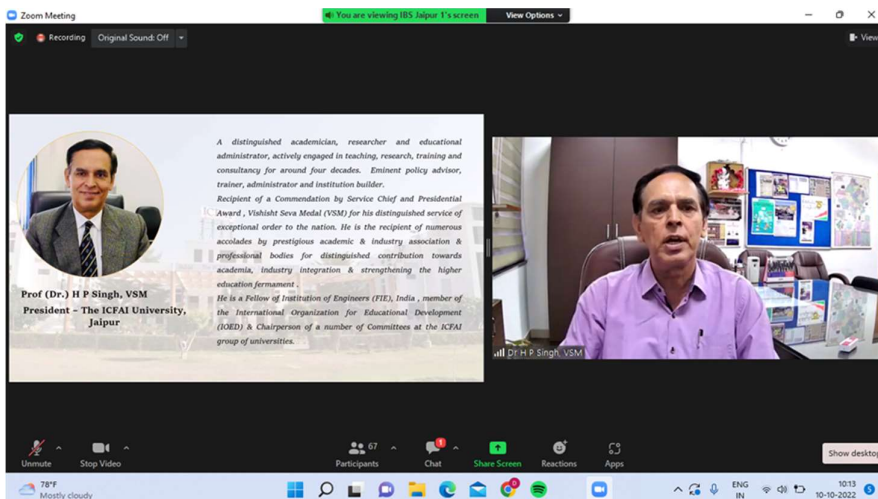


**Report**  
**On**  
**Five Days Online Faculty Development Program**  
**On**  
**Research Methodology**

An Online Faculty Development Program was organized from 10<sup>th</sup> to 14<sup>th</sup> October 2022 by the ICFAI Business School, Jaipur. This was a five-day Faculty Development Program conceived to discuss the modalities of research with the academic fraternity. Two sessions of 1 hour and 30 minutes were scheduled every day for the participants. The various related subtopics such as “Research ideas for problem-solving at Micro & Macro level”, “Discussion on Research Process”, “Descriptive Statistics”, “Distribution & Sampling”, “Statistical Inferences: Estimation and hypothesis testing for one sample and two samples”, “Analysis of Variance”, “Correlation and Linear Regression”, “Analysis of Categorical Data: Chi-Square Goodness of Fit Test”, “Wilcoxon Matched-Pairs Signed Rank Test & Run Test” & “Mann-Whitney U Test & Kruskal-Wallis Test: Analysis of Variance by Ranks” were discussed in detail by experts.

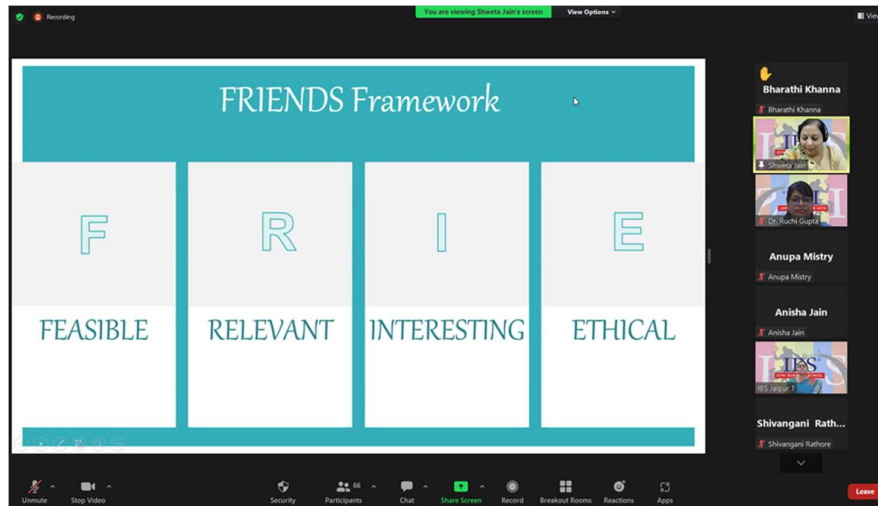
Hundred and One (101) participants were registered from different Universities and colleges across India and abroad. Prominent were Michigan State University, JECRC University, Jaipur, Jiwaji University, Indian Institute of Health Management and Research (IIHMR) Jaipur, Dr. B.R Ambedkar PG College (Nimbehra), Christ University, Jai Narain Vyas University Jodhpur and many more.

On 10<sup>th</sup> October 2022, the program started with an inaugural session. The participants were welcomed by Dr. Shweta Jain, Dean - ICFAI Business School, Jaipur. Hon’ble President Prof (Dr) H P Singh, VSM gave his inaugural speech and stated the importance of FDPs in career progression.

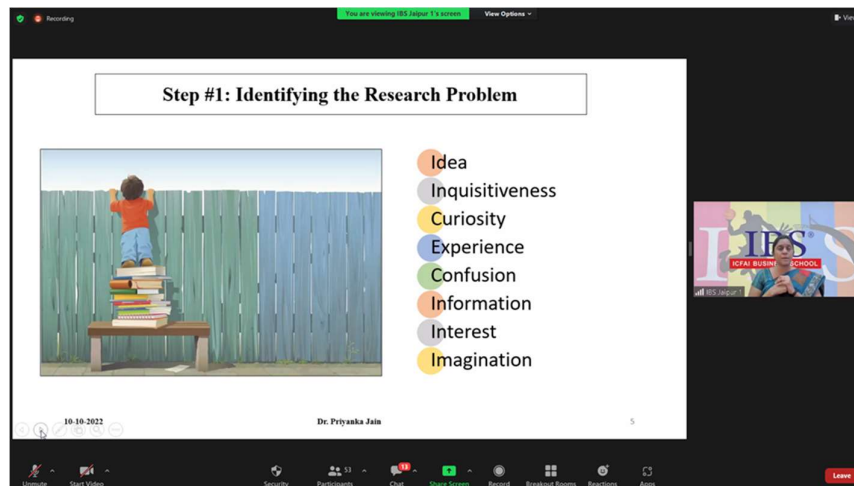


The first session started with the “Research Ideas for Problem-Solving at the Micro & Macro Level”. The speaker Dr. Shweta Jain- Dean, IBS emphasizes on “Friends Framework”

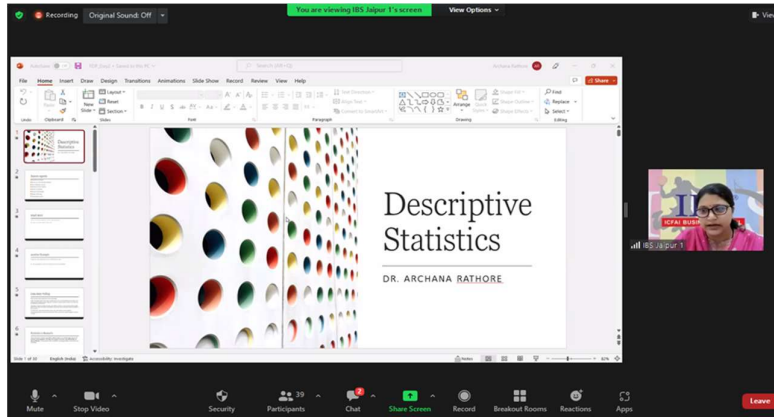
for the conceptualization of the research area and discussed a five-step planned approach for the fine-tuning of the research topic.



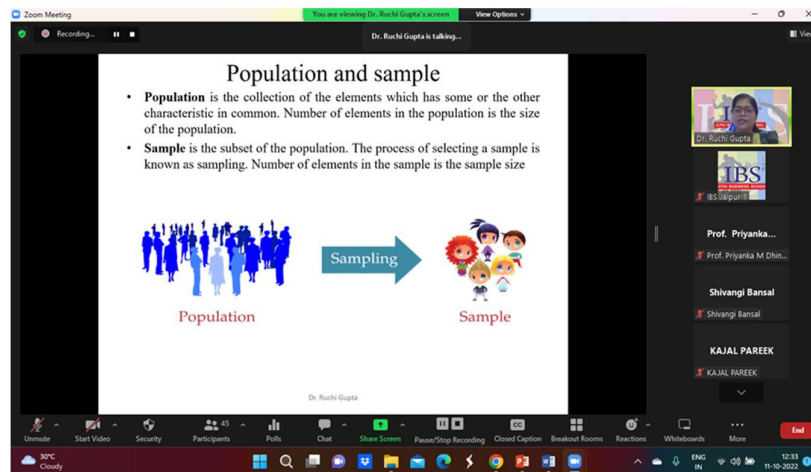
The second session discussed the “**Research Process**” and its modalities. The resource person Dr. Priyanka Jain, emphasized the “Hour Glass Model & King Model” to identify the research gap and designing of the research aim based on the 5c’s of literature review and elements of research design.



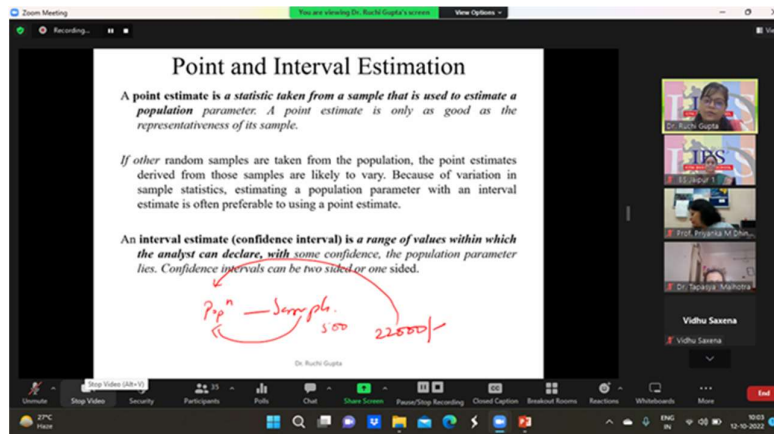
11<sup>th</sup> October 2022, the second day of the FDP started with a detailed discussion on “**Descriptive Statistics**” and the speaker was Dr. Archana Rathore. She discussed the importance and usefulness of the basic features of data. Her focus of discussion was on the measure of central tendency; the contrast between descriptive statistics that sensibly simplify a large amount of data and inferential statistics where data analysis can lead to conclusions about the population under consideration.



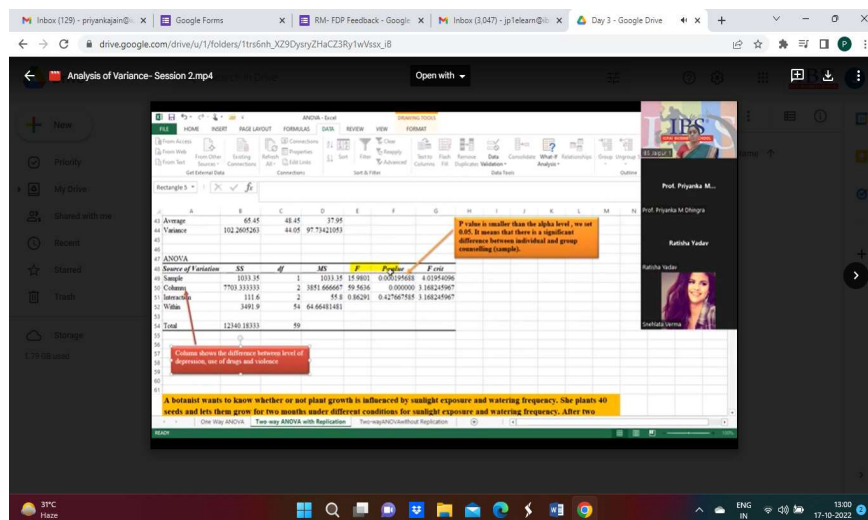
The second session discussed “**Distribution & Sampling**” and the speaker was Dr. Ruchi Gupta. She explained how the distribution helps a researcher to understand how a sample statistic varies from sample to sample. She further explained that sampling distributions are essential for inferential statistics because they allow a researcher to understand a specific sample statistic in the broader context of other possible values.



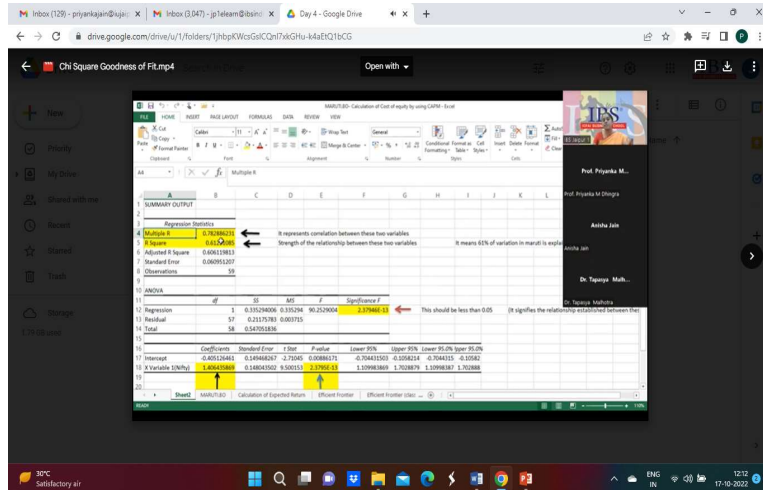
12<sup>th</sup> October 2022, the third day of the FDP started with the discussion on “**Statistical Inferences: Estimation and Hypothesis Testing for One Sample and Two Samples**”. The speaker was Dr. Ruchi Gupta and she explained the estimation and how it uses the 'statistics' obtained from the sample as an estimate of the unknown 'parameter' of the population based on the sample drawn from the population. She also discussed the difference between the hypothesized value and the actual value of the sample's mean tests the validity of an assumption.



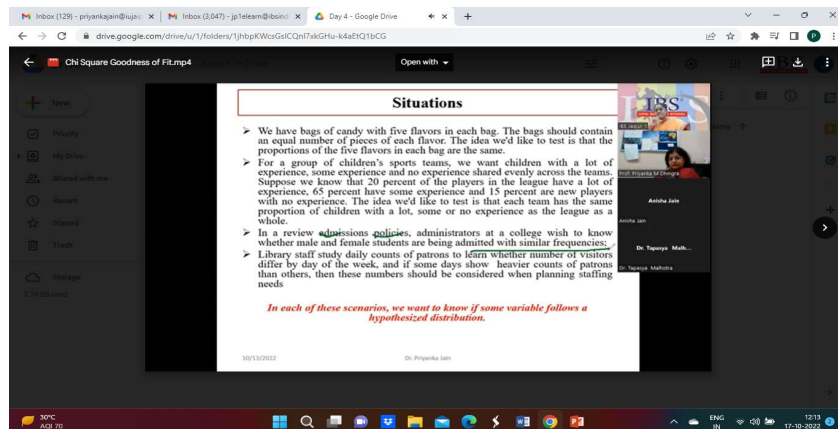
The speaker of the second session was Dr. Priyanka Jain and she had a detailed discussion on the topic “ANOVA”. Her focus of discussion was on one-way and two-way ANOVA with hand on practice on excel. She explained the various assumptions and the application of ANOVA in the real scenario.



13<sup>th</sup> October 2022, on the fourth day of the FDP the resource person Dr. Priyanka Jain discussed the intricacies and prerequisites of the “**Correlation and Linear Regression Methods**”. She explained the difference between the two statistical tools and discuss the ideal spectrum of interpreting correlation coefficient in social science studies. A detailed discussion on the testing for Multicollinearity with Variance Inflation Factors (VIF) was done with the participants. The resource person performed the regression in excel and discusses the various assumptions as the prerequisite of the statistical tool.

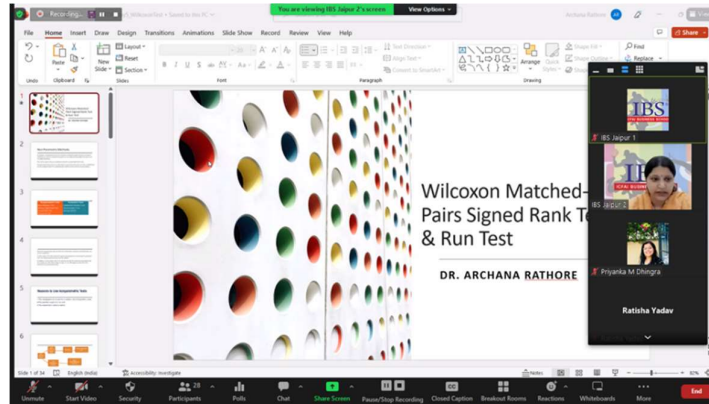


The second session was on the topic of “**Analysis of Categorical Data: Chi-Square Goodness of Fit Test**”. Dr. Priyanka Jain, the resource person discussed the characteristics of the single-sample nonparametric test, also referred to as the one-sample goodness-of-fit test or Pearson's chi-square goodness-of-fit test. She shared that the test is used to determine whether or not a categorical variable follows a hypothesized distribution.

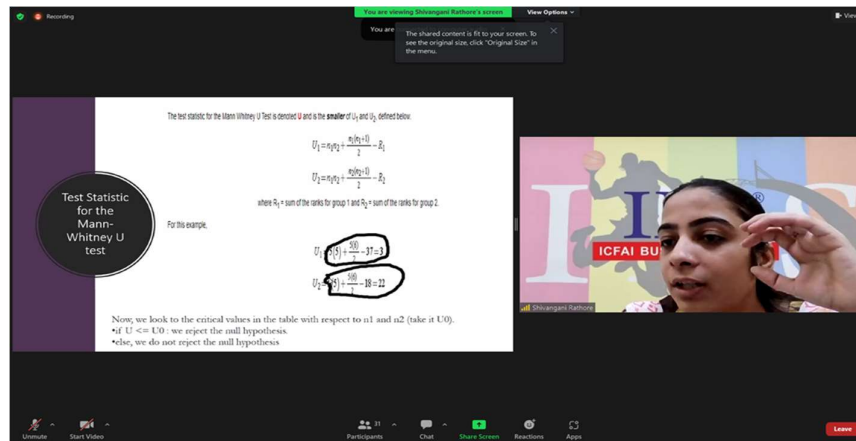


14<sup>th</sup> October 2022, the last day of the FDP focussed on the non-parametric tests. The resource person of the first session was Dr. Archana Rathore and she discussed the “**Wilcoxon Matched-Pairs Signed Rank Test & Run Test**”. She explained the detailed step-by-step process and assumptions of the tests. She performed the test in excel and helps the participants to understand the technicalities of the procedure



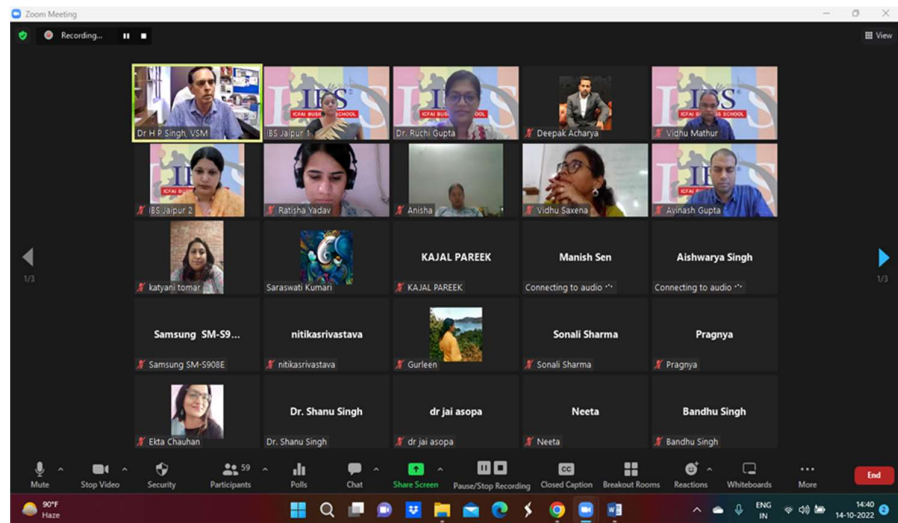
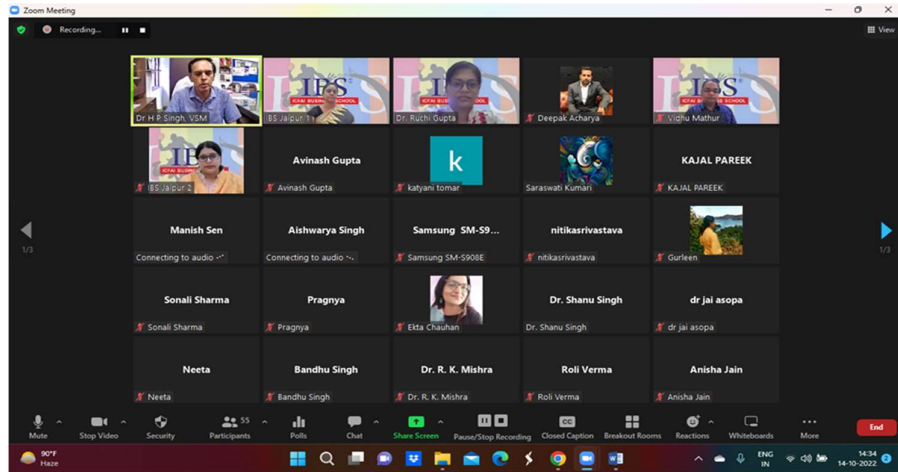


The second session's resource person was Dr. Shivangani Rathore and she discussed the prerequisites of the “**Mann-Whitney U Test & Kruskal-Wallis Test: Analysis of Variance by Ranks**”. She explained that the Kruskal- Wallis test compares the medians of several (more than two) populations to see whether they are all the same or not. She mentioned that the Kruskal- Wallis test is a non-parametric analog to ANOVA. She also discussed the Mann-Whitney U test is used to compare differences between two independent groups when the dependent variable is either ordinal or continuous, but not normally distributed.



A Valedictory Session was scheduled at 2:30 PM on 14<sup>th</sup> October 2022. Dr. Vidhu K Mathur started the session with a welcome note to the dignitaries of the University, the colleagues, and the FDP participants. Dr. Priyanka Jain, Convener of the FDP presented the report and Dr. Ruchi Gupta, co-convener of the FDP extended the vote of thanks to the participants for their enthusiastic & interactive participation. She expressed her gratitude to the resource persons for taking such thought-provoking, informational and knowledgeable sessions. The program ended with thanks to the Honourable President Prof (Dr) H P Singh, VSM, and Dr. Shweta Jain-Dean IBS for their valuable guidance and support throughout the five days program. Five days of

FDP focused on the practical applications of the parametric and non-parametric tests and the drawing of the inferences from statistical tools.



## Feedback from Participants



FDP participants shared that FDP sessions were interactive and informative and were well-structured, insightful, and thought-provoking. All the speakers were at par with their knowledge. FDP participants found the sessions engaging and were able to correlate with the topics. They expressed gratitude and appreciation for the organizing team. The following excerpts are direct quotes received from participants at FDP:

“Thanks to the Team IBS Jaipur which has put in a lot of effort to give us an insight into parametric and non-parametric tests. Sessions were comprehensive and resource persons were very sorted and knowledgeable no doubt”. **Ms. Vidhu Saxena**

“The FDP was well structured and added immense learnings to the research scholars. I would be grateful if we have a refresher on the same in a month”. **Ms. Ratisha Yadav**

“Overall it was good, resource persons have explained the topic in a very efficient manner”. Highly Knowledgeable Session. Like to attend such sessions in the future”. **Dr. Tapasya Julka Malhotra**

“The FDP conducted by ICFAI Business School (IBS), The ICFAI University, Jaipur was very good and informative. It was a knowledgeable and enriching experience I am delighted that I got this opportunity to join this FDP. Looking forward to such opportunities in near future as well”. **Richa Goswami**

### **Recommendations**

Actuated by the encouraging response received from the participants and the resource persons ICFAI Business School, Jaipur, plans to continue with the initiatives like FDP, MDP, and similar development interventions.