VIDYASHILP UNIVERSITY

FACULTY DEVELOPMENT PROGRAM

— On —

Integrative Pedagogy to Teach Statistics and Data Science for Undergraduates

DAY1: 27th
July,2022

— Organized by —

VU | School of Computational & Data Sciences

Core Faculty Development Program Topics:

Session 1: Overview: Relevance of Statistics/ Data Science – provide high level contributions of Statistics/ Data Science – Examples from some major disciplines.

Session 2: Case study approach and its significance Lunch Break

Session 3: Descriptive Statistics – Case study approach to discuss appropriateness of the measures of central tendency, dispersion.

Session 4: Introducing Probability and distributions using Case study approach.

Summary:

Session1:

Faculty development program presentations and discussions both delved into how teaching practices can be changed very much in line with the end users' day to day experience/real life situations from multiple disciplines such as Agriculture, Medical Science, Social Studies etc. which allows for a range of benefits:

- A gentler introduction less likely to scare students away
- Faster output of capable data scientists in a world which desperately need them.
- Pushes students to be creative and responsible in their own learning.
- Greater accessibility to data science.

One of the most enlightening parts of the faculty development program discussion was asking the participants in the room to share and discuss their experiences in handling the introductory sessions.

Another interesting focus was on how to enhance evolving understanding of teaching practices, and examine topics such as teaching interactively, encouraging participation, and best practices in teaching.

Session2:

Discussed the importance of a Case study based approach by stating that "A good case puts a student into the position of the real world manager facing the challenge to make a decision and prepare a plan of action. It has also been expected that all students study cases, and come to their own conclusions about what should be done, discuss and defend suggested solution."

Checklist for the successful case-based learning and teaching in statistics service courses and management courses has been discussed in detail.

Session3:

Case study on a hypothetical DOSWKUSI has been given to the participants for the interaction. Further discussed about the importance of understanding the problem, analyzing the data availability and teaching the concepts relating the information etc.

Session4:

Integrative pedagogy importance with the scenarios has been explained to provide a deeper understanding of content by accommodating a variety of learning styles, theories and multiple intelligences.