

INTER UNIVERSITY CENTRE FOR TEACHER EDUCATION

अन्तर विश्वविद्यालय शिक्षक शिक्षा केंद्र

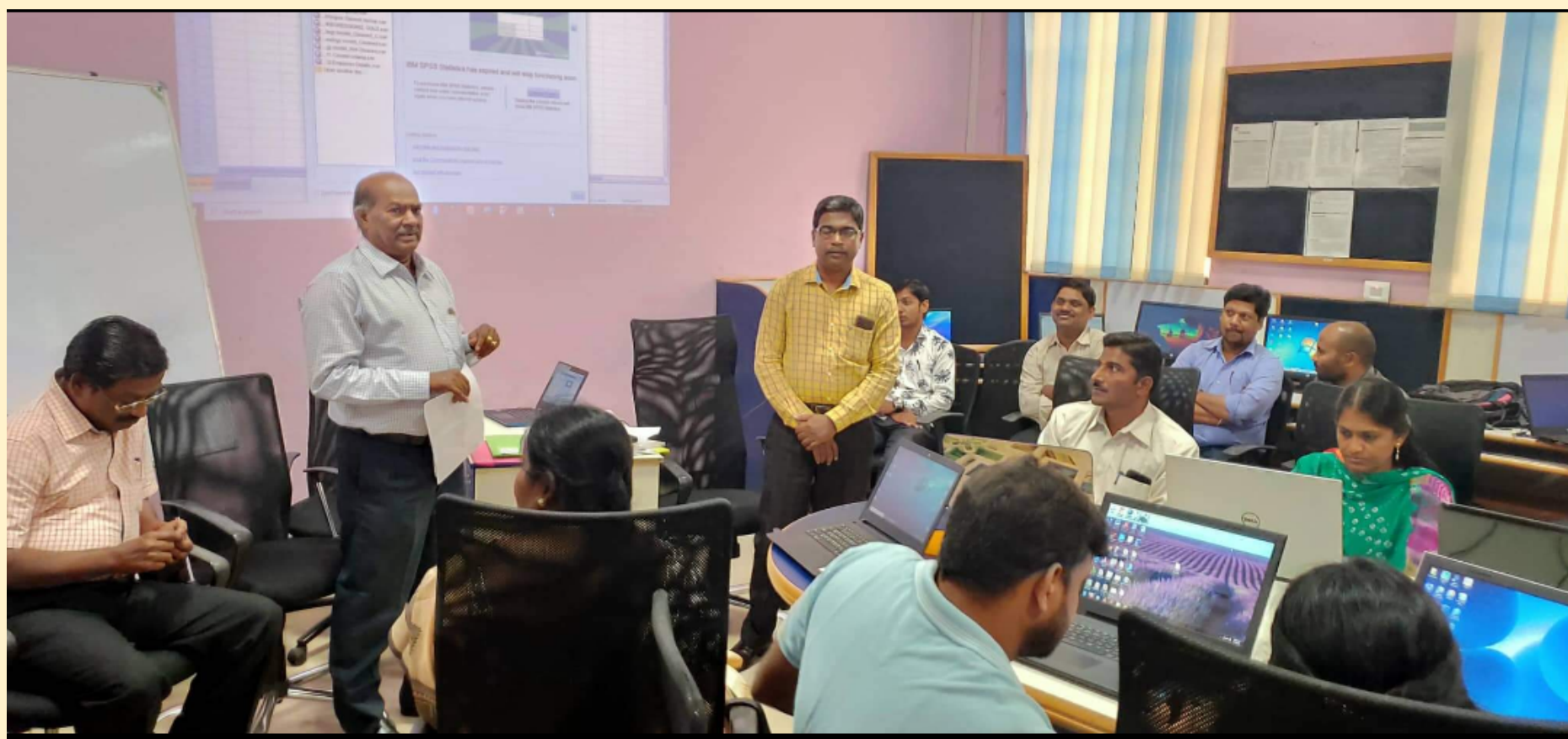
REGIONAL INSTITUTE OF EDUCATION

क्षेत्रीय शिक्षा संस्थान

Manasagangotri, Mysuru - 570006.



**A Report on
Three Day Workshop on “Application of SPSS and R Software for
Statistical Analysis in Educational Research”
(13, 14 & 15 February 2020)**



PROGRAMME COORDINATOR

Dr. S. Prasannakumar

Associate Professor

IUCTE, RIEM

Introduction

The Department of Higher Education, Ministry of Human Resource Development, Govt. of India, New Delhi has recently set up an Inter University Centre for Teacher Education (IUCTE) at the Regional Institute of Education, Mysuru. which is one of the constituent units of the NCERT, New Delhi which in turn is an autonomous body under the Ministry of HRD, Govt. of India, New Delhi. The IUCTE aims to strengthen the knowledge base of Teacher Education by facilitating professional development, networking, new knowledge creation and empowerment of teachers of Academic Institutions and Central & State Universities in Southern Region.

In this Modern era the importance of the subject statistics has been felt in most of the stream to Education, Psychology, and sociology due to its wide applications in research through statistical software, We have new application areas of statistics and established techniques being applied in new ways and emerging fields. The value of statistics is strong as they can serve as predictions and probabilities in certain trends.

Educational research refers to the systematic collection and analysis of data related to the field of education. In general, in education, researchers may use qualitative methods, quantitative methods and mixed methods of research. Research may involve various aspects of education including student learning, teaching methods, teacher training, classroom dynamics, educational psychology, educational technology, and educational sociology. A number of software and programming language such as SPSS & R software has been developed for this purpose. Most researches still find it a struggle to effectively use the available software. Thus, this workshop aims to impart training in the field of data analysis using software.

Objectives of the workshop

- To make the teacher educators learn to store, manipulate and analyze data using the software
- To provide hands-on training on applications of SPSS & R Software in Educational Research.

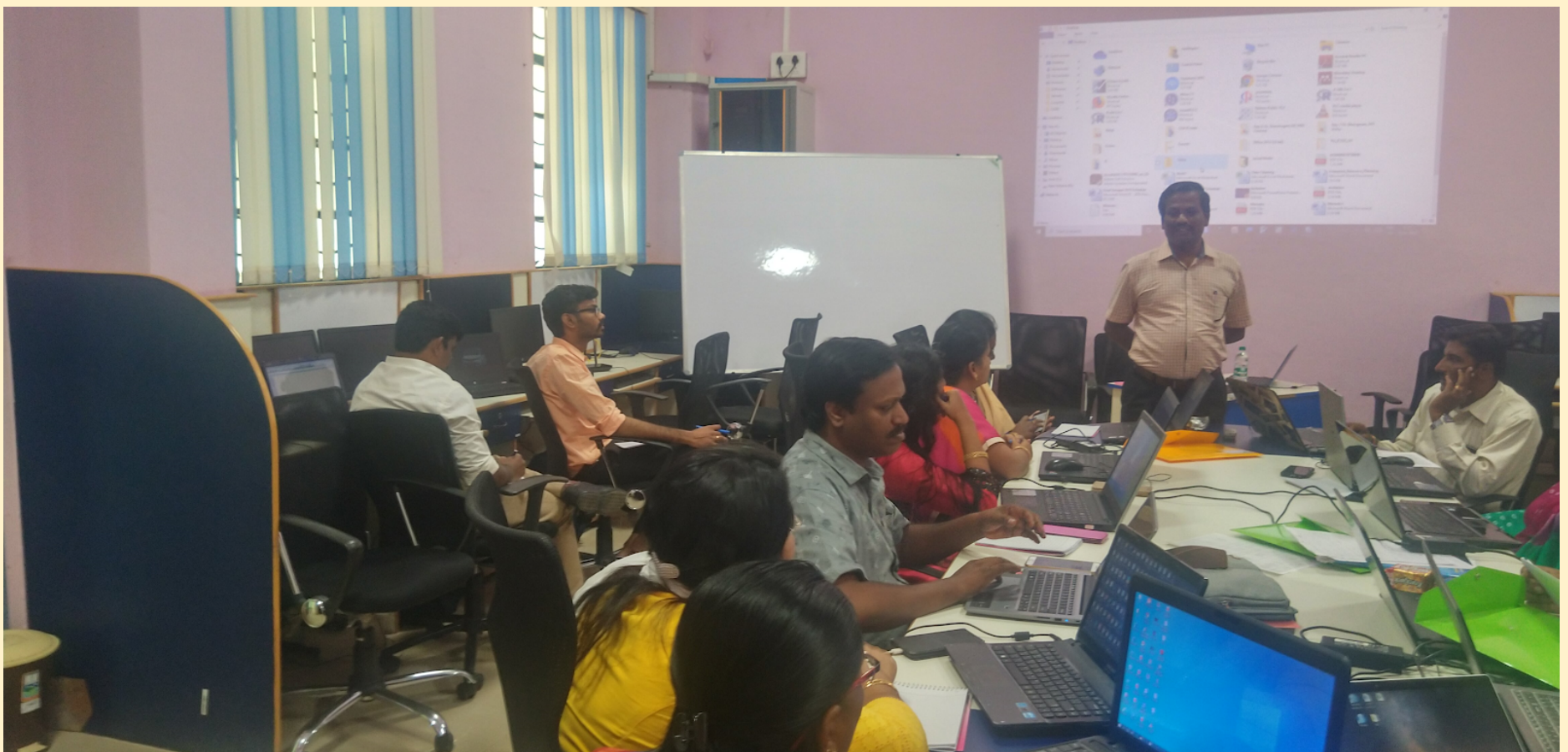
Focal points of the Workshop

Data Entry, Data Conversion, Univariate Analysis, t-test, chi-square test, Correlation, Regression, ANOVA, ANCOVA, MANOVA, MANCOVA.

DAY WISE PROCEEDINGS OF THE WORKSHOP

Day 1 (13/02/20)

Three days National Workshop organized at the Inter University Centre for Teacher Education, Regional Institute of Education, Mysuru on **“Application of SPSS and R Software for Statistical Analysis in Educational Research”** scheduled from - February 13-15, 2020 has started. The session commenced with the welcome speech of Dr. S,Prasannakumar, Associate Professor & Programme coordinator, IUCE, RIEM formally welcoming the Director



of IUCTE & resource person. He also welcomed the distinguished participants from various state and central universities of southern India. He threw light upon the need for SPSS & R software in statistical analysis and discussed about the importance of the software in today's scenario. Dr. Kasilingam. Professor, Department of Management studies, Central University of Pondicherry, has acted as a resource person. Dr. M.S.Talawar, Director, IUCTE, gave the explanation about functions of IUCTE.



The first sessions of the Workshop has handled by Dr. Kasilingam, he was planned to provide practical hands on training of SPSS to the participants. The expert introduced to the participants about the basic concepts used to handle SPSS software and briefed upon its utility along with a comparison with Ms Excel's Data. The main objective of the session was to help a Teacher educator in doing his research work with SPSS. The speaker provide training from the basic entry of data in excel to calculation.

He has provided hands on training on the following topic/content to the participants.

- Data entry
- Entering and modifying data
- Creating the data definitions: the variable view
- Variable types
- Variable names and labels
- Binary variables
- Recodes and Transformations



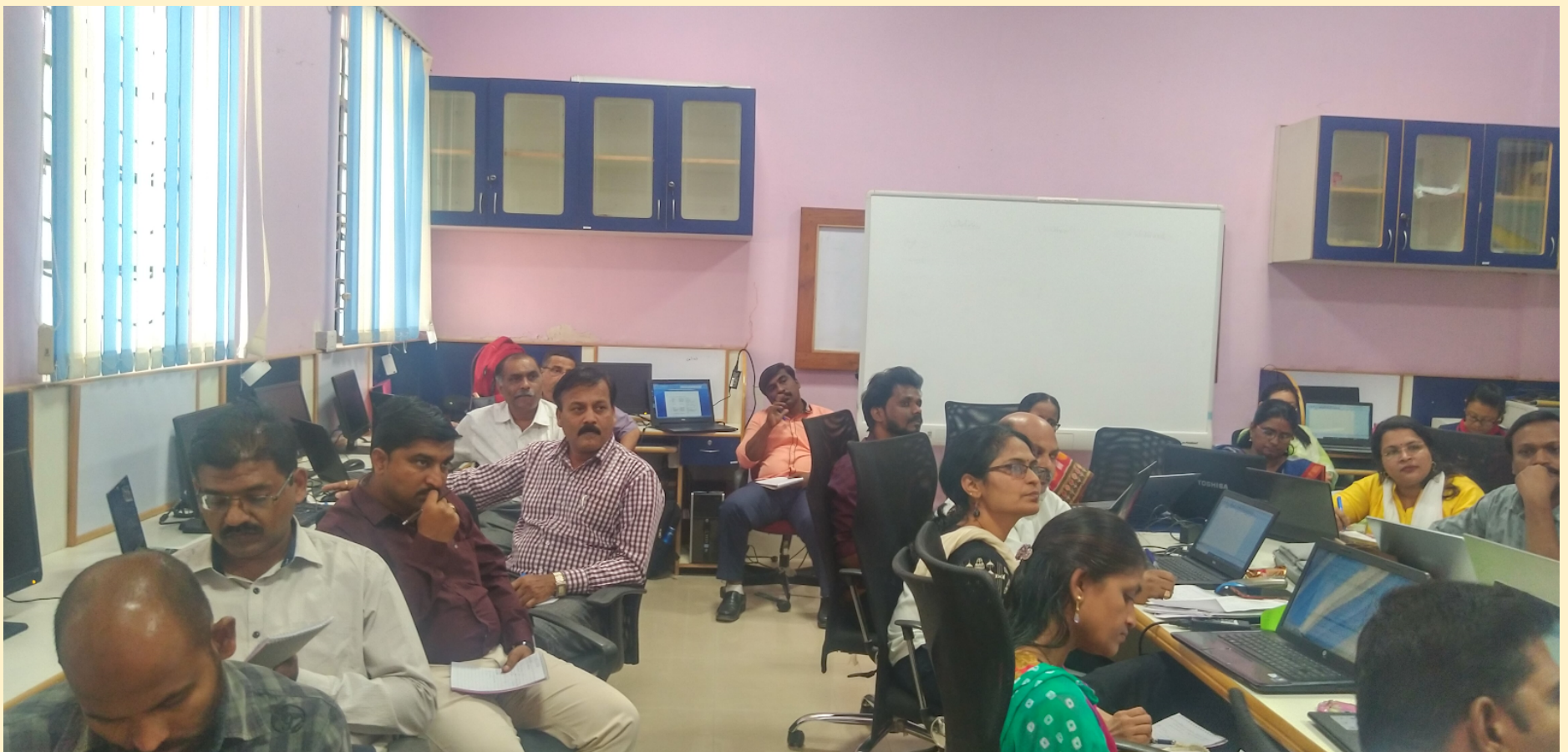
In the afternoon session the expert has provided hands on training of the descriptive statistics, cross tabulation, Compare Means, One Sample t-test, and Independent Samples t-test. The participants were actively participated and interacted to each other.

Day II (14/02/20)

The Morning session of the second day, the participants got practiced on basic of the RStudio Tutorial for statistics in educational research.

In this R Studio tutorial, they were performed the following operations:

- Downloading/Importing Data in R.
- Data Transformation and other Miscellaneous Data Operations.
- Performing Statistical Modeling on the Data.
- Creating Graphical Plots of Data.



The afternoon session the participants were performed the following statistical operation by SPSS and R software. The participants were actively involved and they performed step by step training of the following statistical techniques.

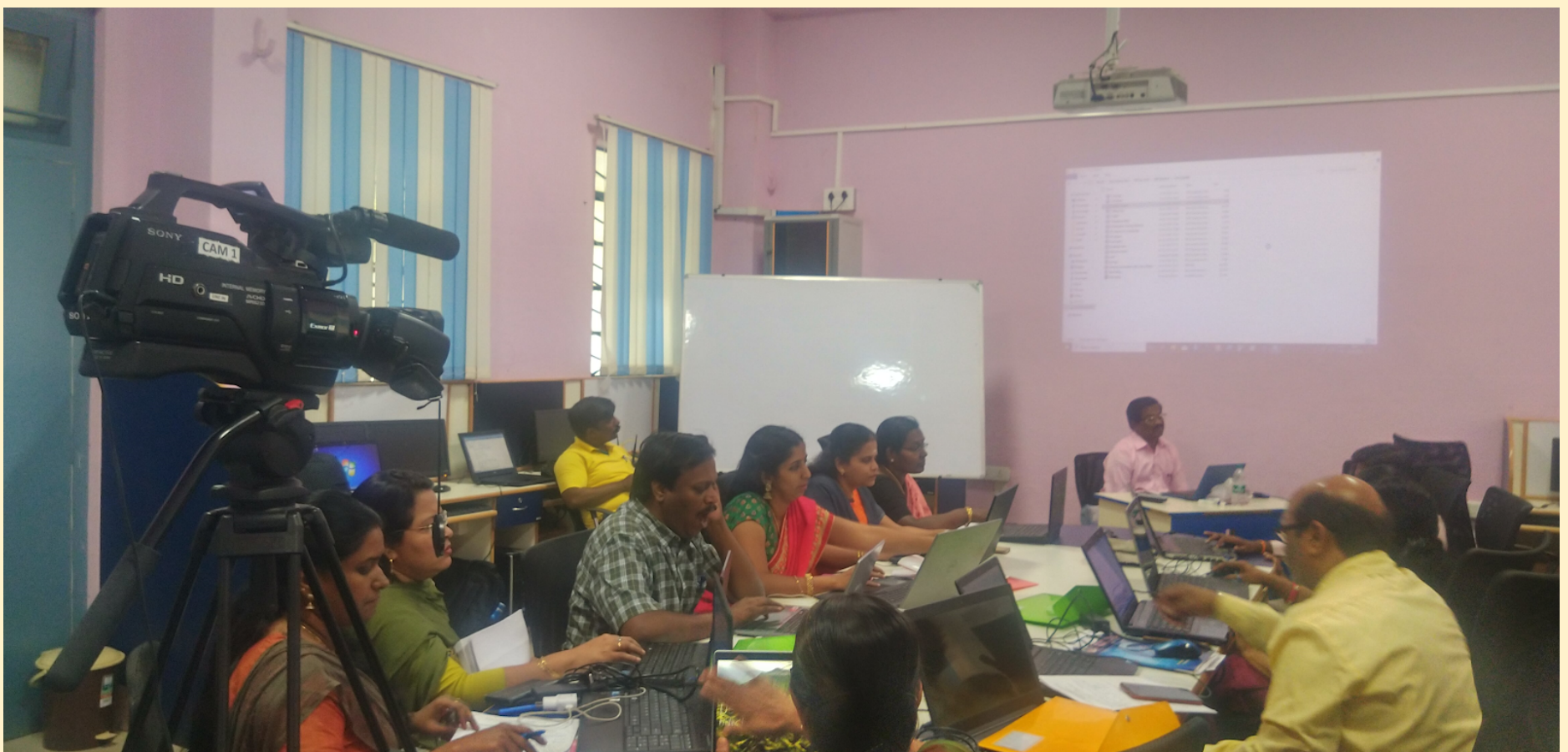
- ANOVA & ANCOVA
- MANOVA & MANCOVA



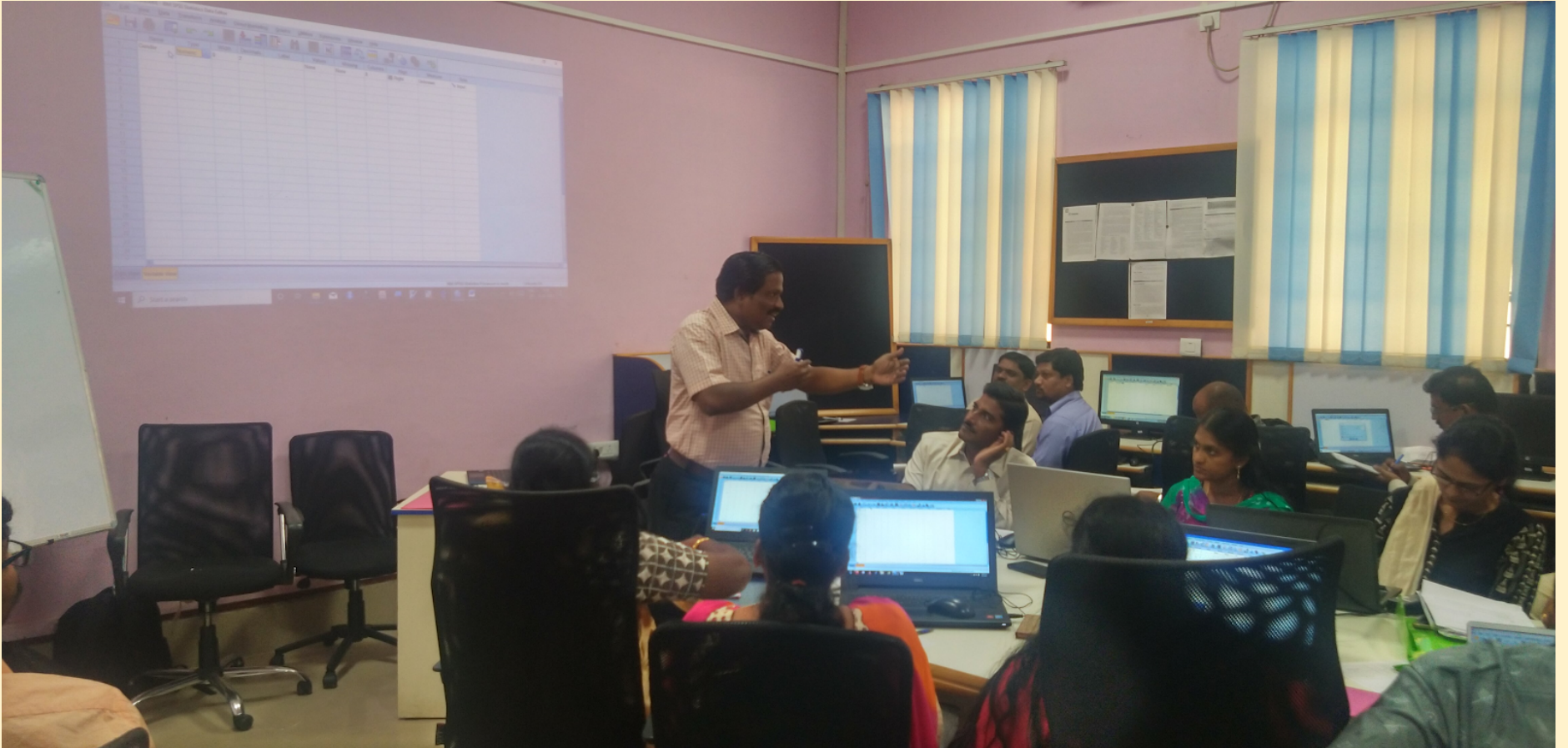
Day III (15/02/20)

The third day of the workshop, the resource person Dr.R.Kasilingam has focused on practical hands on training on Sample size determination and Reliability checking.

The afternoon session, the participants were performed Cluster Analysis by using SPSS and R software. The session concluded with individual interaction between the participants and the resource person.



The Programme Coordinator in his speech thanked all the participants for their involvement and active participation in the workshop. He spoke about the uniqueness of programme and hoped that all the participants give inputs in future programmes and activities of IUCTE. The resource person has distributed certificates to the participants. The participants were gave feedback of the workshop.



INTER UNIVERSITY CENTRE FOR TEACHER EDUCATION
(National Council of Educational Research & Training)
Regional Institute of Education, Manasagangotri, Mysore - 570006.

A Three Day Workshop on “Application of SPSS and R Software for Statistical Analysis in Educational Research”

PROGRAMME SCHEDULE VENUE: E-learning Lab, RIE, Mysuru

13th to 15th February 2020

DAY & DATE	SESSION -1	Tea Break	SESSION -2	Lunch Break	SESSION -3	Tea Break	SESSION-4
DAY I - 13th February 2020	09.30 - 10.00 AM REGISTRATION ***** 10.00 - 10.30 INAUGURATION ***** 10.30 to 10.45 AM Welcome & Keynote address By Dr. S.Prasannakumar Project Coordinator Dr. R.Kasilingam, Professor, Pondicherry University Resource Person	 <i>10.45</i> - <i>11.00</i>	11.00 - 12.00 Data Entry (Nominal, Ordinal, Interval, Ratio) Multiple tick and Data Conversion 12.00 - 1.00 Recode into same variable, Recode into different variable, System missing	 <i>1.00</i> - <i>2.00</i>	2.00 - 3.00 Univariate Analysis – Frequency, Mean, Descriptive Statistics 3.00 - 4.00 Chi-Square test, Correspondence Analysis	 <i>4.00</i> - <i>4.15</i>	04.15 - 05:30 One Sample t-test, Independent Samples t-test
DAY II - 14th February 2020	09.30 - 11.00 Correlation, Partial Correlation,	<i>11.00</i> - <i>11.15</i>	11.15 - 12.15 Simple Regression Multiple Regression 12.15 - 01.15 Step wise Regression	<i>1.15</i> - <i>2.15</i>	2.15 - 3.15 Paired Samples t-test, 3.15 - 04.15 ANOVA & ANCOVA	<i>4.15</i> - <i>4.30</i>	04.30 - 05:30 MANOVA & MANCOVA
DAY III - 15th February 2020	09.30 - 11.00 Repeated Measures ANOVA	<i>11.00</i> - <i>11.15</i>	11.15 - 12.15 Sample size determination 12.15- 1.15 Reliability checking,	<i>1.15</i> - <i>2.15</i>	2.15 - 03.15 Normality checking, 3.15 - 04.15 Cluster Analysis	<i>4.15</i> - <i>4.30</i>	4.30-5.30 Valedictory, Feedback & Certificate Distribution

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A Three Day Workshop on “ Application of SPSS and R Software for Statistical Analysis in Educational Research”

DATES: 13th to 15th February 2020

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