Velagapudi Ramakrishna Siddhartha Engineering College

Department of Computer Science & Engineering

REPORT ON
One Week Faculty Development Program (FDP)
ON

"Effective Teaching-Learning Strategies in Technical Education"

22nd – 26th June 2020

Under AICTE MARGDARSHAN

In Collaboration with NITTTR Chennai

IQAC cell and Dept of Computer Science and Engineering, VRSEC has successfully organized a One Week FDP on **"Effective Teaching - Learning Strategies in Technical Education"** exclusively for Margdarshan Mentee Colleges. This program is organised in collaboration with NITTTR Chennai from **22nd - 26th June 2020.**

A total of 48 participants from 11 mentee colleges and host institution have been deputed and attended the program.

THE OBJECTIVES OF THIS FDP ARE:

1. To understand the behavior of current day learners
2. To apply principles of learning appropriate to students
3. To use appropriate instructional methods and media
4. To acquire competency for effective planning for teaching
5. To acquire competencies of teaching through microteaching
6. To acquire competency in technology enabled learning
7. To use appropriate evaluation tools to assess students
8. To use various strategies in motivating students

INPUT:

Teaching Learning Process – Instructional Objectives/Outcomes – Student Characteristics – Motivation - Instructional Methods - Instructional Planning – Micro/Simulated Teaching – Technology Enabled Learning – Student Evaluation - Test Items - Design of Achievement Tests – Teaching Skills - Microteaching Exercise

PROCESS:

Lecture cum discussions - Guided practice - Simulated teaching exercise

OUTCOME:

Enhanced Competencies in Teaching Technical subjects

COURSE SCHEDULE

Date/Time	10.00 a.m. – 11.00 a.m.	11.15 a.m. – 12.15 p.m.	02.00 p.m.- 03.00 p.m.	03.15 p.m. – 04.15 p.m.
22.06.2020 Monday	Registration & Teaching Learning Process SRD		Instructional Objectives/Outcomes KSG	
23.06.2020 Tuesday	Gen Z Learner Characteristics and Motivation SRD		Teaching Methods PM	
24.06.2020 Wednesday	Technology Enabled Learning GJ		Planning for Teaching RS	
25.06.2020 Thursday	Teaching Skills SRD	Microteaching Exercise SRD/DVS	Introduction to OBE KSG	Microteaching Exercise SRD/DVS
26.06.2020 Friday	Evaluation Overview SRD	Preparation of Test Items SRD	Design of Question Paper KSG	Feedback & Valediction SRD

Course Faculty:

S.No	Faculty	Email & Mobile
1.	Dr.R.Santhakumar (**RS**) Professor & Head, CRED, NITTTR, Chennai	ramusanthakumar@gmail.com 94440 32745
2	Dr.P.Malliga (**PM**) Associate Professor & Head i/c CEMT, NITTTR, Chennai	pm.nitttr@gmail.com 93803 42066
3	Dr.G.Janardhanan (**GJ**) Associate Professor & Head i/c CIA, NITTTR, Chennai	jana@nitttrc.ac.in 94455 20968
4	Dr.K.S.Giridharan (**KSG**) Associate Professor, Dept. of Engg. Education	ks.giridharan@gmail.com 99401 21966
5.	Er.D.V.Suryanarayana (**DVS**) Programmer, CCDPC, NITTTR, Chennai	dvsurya@yahoo.com 94444 52057
6.	Dr. S. Renukadevi (**SRD**) Professor & Head, Dept. of Engg. Education NITTTR, Chennai (**Course Coordinator**)	bmrenuka@gmail.com 98402 89459

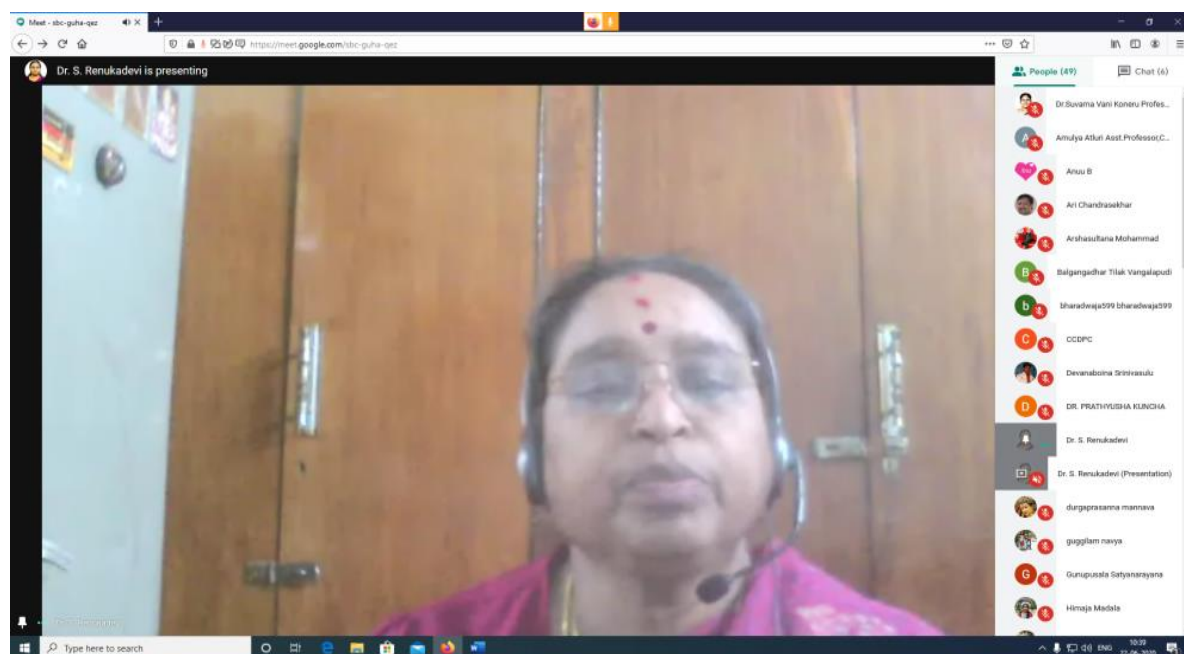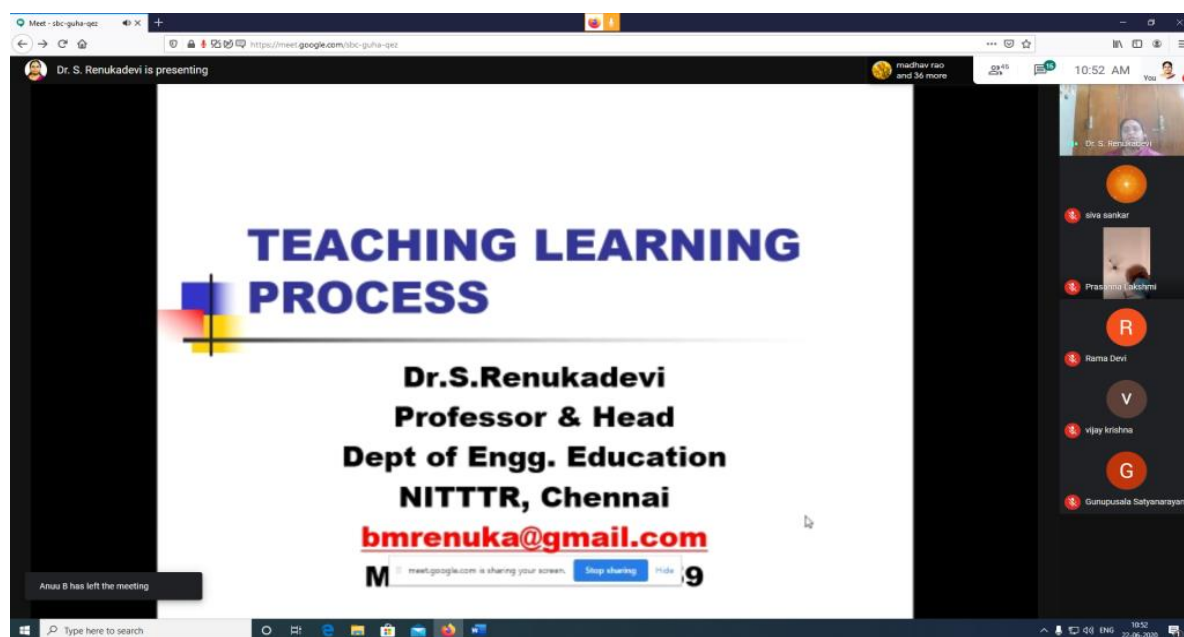# Day1: 22nd June 2020 forenoon:

Speakers: Dr. S. Renukadevi

Professor & Head, Dept. of Engg. Education NITTTR, Chennai (Course Coordinator)

Topic: Teaching learning Processes

This session was handled by Dr. Renuka devi madam, she handled the session on teaching learning processes.

In this session, madam explained about the differentiation about pedagogy and andragogy methods, learning theories, factors influencing learning, modes of learning like observation, imitation, insights and trail and error methods etc.

Day1: 22nd June 2020 afternoon:

Speakers: **Dr. K. S. Giridharan**

                Associate Professor, Dept. of Engg. Education

Topic: Instructional Methods

In this session Dr.Giridharan took the session on instructional objectives. The instructional objectives are behavioural objectives. For each course there have two types of instructional objectives which are general objectives and specific objectives. The speaker had explained two methods for stating objectives which are Marger's method and Grounlund'smethods. Finally focused on blooms taxonomy for writing objectives for a core subject and advanced subject.
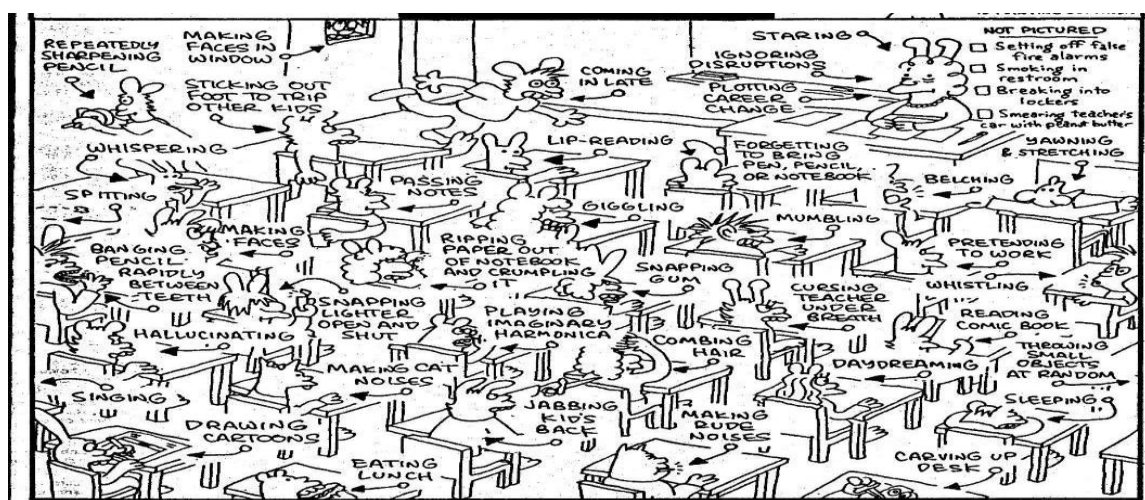
Day 2: 23rd June 2020 Forenoon:

Speakers: Dr. S. Renukadevi

Topic: Gen Z learners characteristics and Motivation

In this session madam had given lecture on how personality of person defined in different dimensions, student characteristics like physical, cognitive, emotional and social characteristics, Complexity with Gen Z learners , motivational activities which can be taken for Gen Z learners, difficulties in a class room , student problems and different strategies for motivating students.

Students in A Classroom

At the last the speaker talked about critical teacher behaviours in the class room.

Day 2: 23rd June 2020 afternoon:

Speakers: Dr. P. Malliga
                 Associate Professor & Head i/c CEMT, NITTTR, Chennai

Topic: Teaching Methods

In this session we had an interactive session on teaching methods. The speaker has explained about types of instruction methods, different strategy of instructions components in spectrum of instructional methods. In this session the participants learned about challenges to the teacher in lecture, characteristics of a good teacher, strength and limitations of a teacher, guidelines for effective demonstration.

Instructional Methods

Dr. P. MALLIGA
Associate Professor & Head i/c
Centre for Educational Media and Technology
NITTTR, Chennai

The following will illustrate different ways of content delivery approaches and considerable methods.

| Method	Consider this method for
Lecture	•Presenting completely new material to a large group or when time is limited. •Introducing and summarising and another instruction method.
Demonstration Technique	•Explaining a process, procedure and equipment.
Discussion	•Imparting technical information. •Facilitating attitude change.
Brain Storming	•Stimulating participation when the group is large and when lecture is used predominantly.
Case Studies	•Broadening participants in supervisory and management training. •Helping them to identify and analyse complex problems and to frame their own decisions.
Role Playing	•Attitude change. •Practicing newly acquired principles. •Learning more about interpersonal relations.
Programmed Learning	•Self instruction to enable a trainee to learn at his own speed.

At the end of the session the speaker had conducted a test on teaching methods in kahhoot platform.
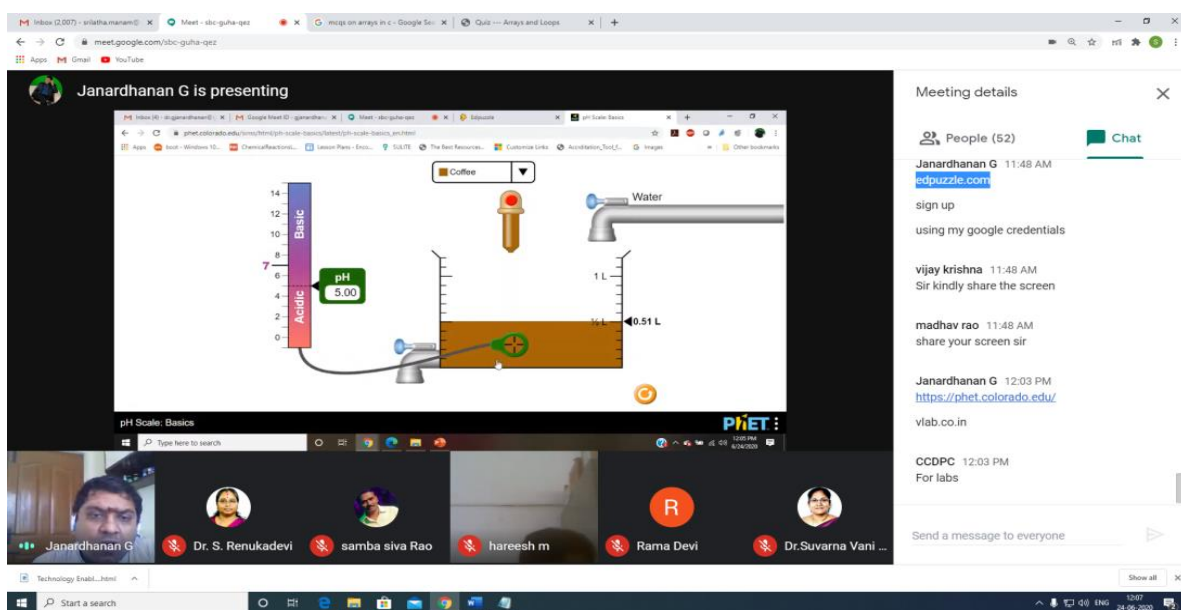
Day 3: 24th June 2020 forenoon:

Speakers: Dr. G. Janardhanan
**   Associate Professor & Head i/c CIA, NITTTR, Chennai**
Topic: Technology Enabled Learning

In this session the participant came to know about some of the online teaching tools for delivering lectures, tools for conducting tests etc. In this session mainly the speaker given demonstration on edpuzzle.com for creating lectures, adding students, compressing video, voice over option, generating certificate etc.
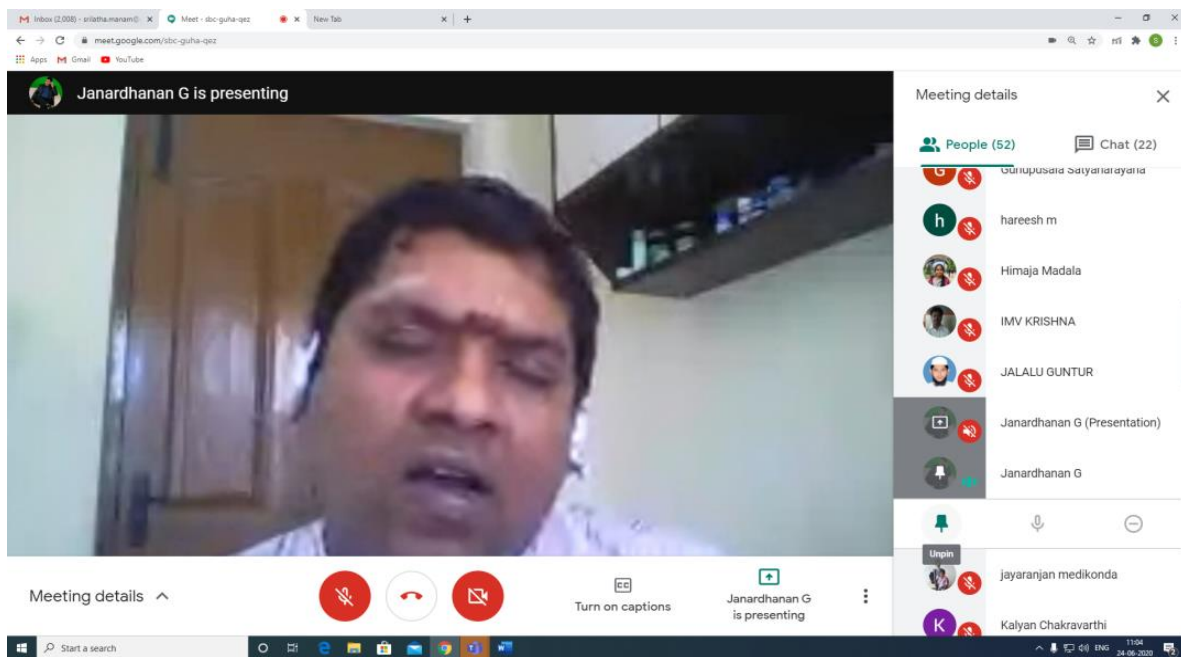
In the continuation the speaker demonstrated about phet.colorado tool for conducting lab sessions, evaluating students etc.

Day 3: 24th June 2020 forenoon:

Speakers: **Dr.R.Santhakumar**
Professor & Head, CRED, NITTTR, Chennai
Topic: Planning for Teaching

Out of this lecture the participants, learned about new methods for preparing lesson plan using 4A and 5E model, four phases of lesson plan.

In this session speaker started with explaining the preparation ofcourse plan, template for unit plan in terms of learning outcome, methods, media and material etc. Later speaker explained about key components to be addressed in lesson plan, four phases of lesson plan like introduction, development, consolidation and conclusion. Finally, the speaker winds up with templates for 4-a model and 5E model for preparing lesson plan effectively.
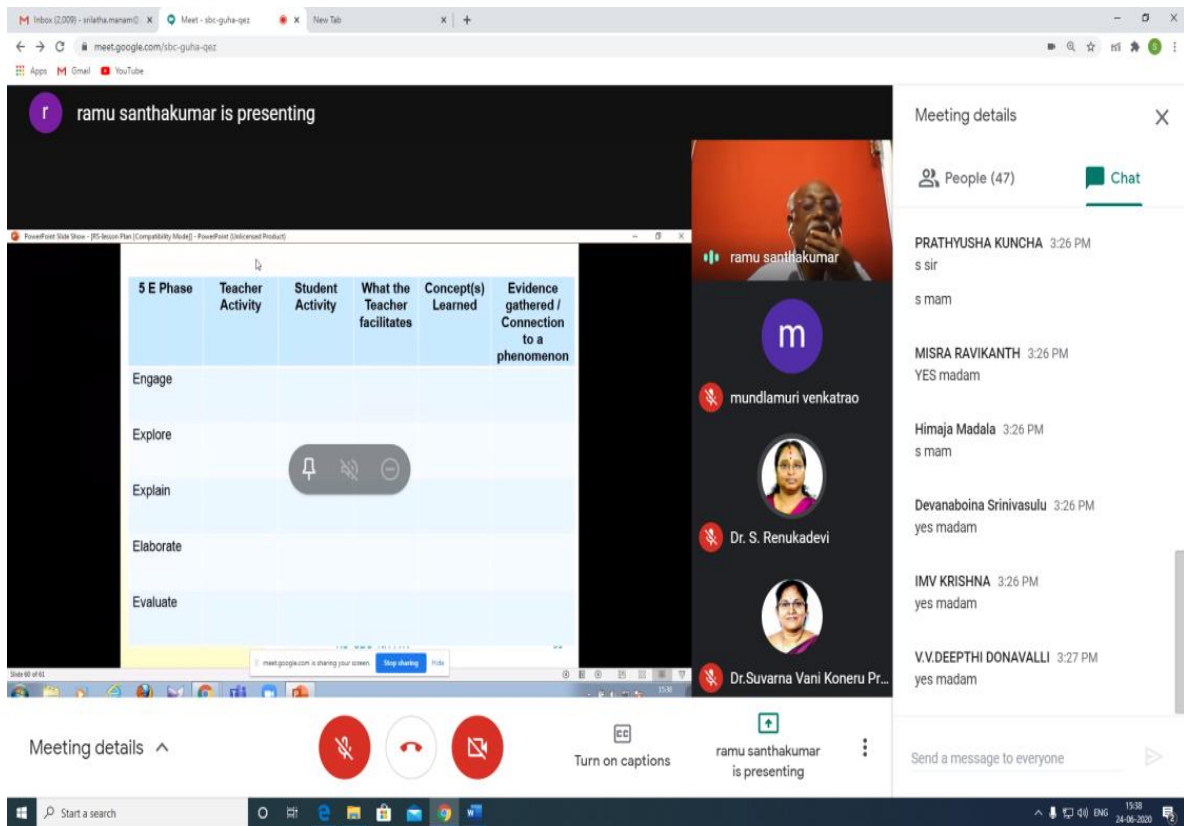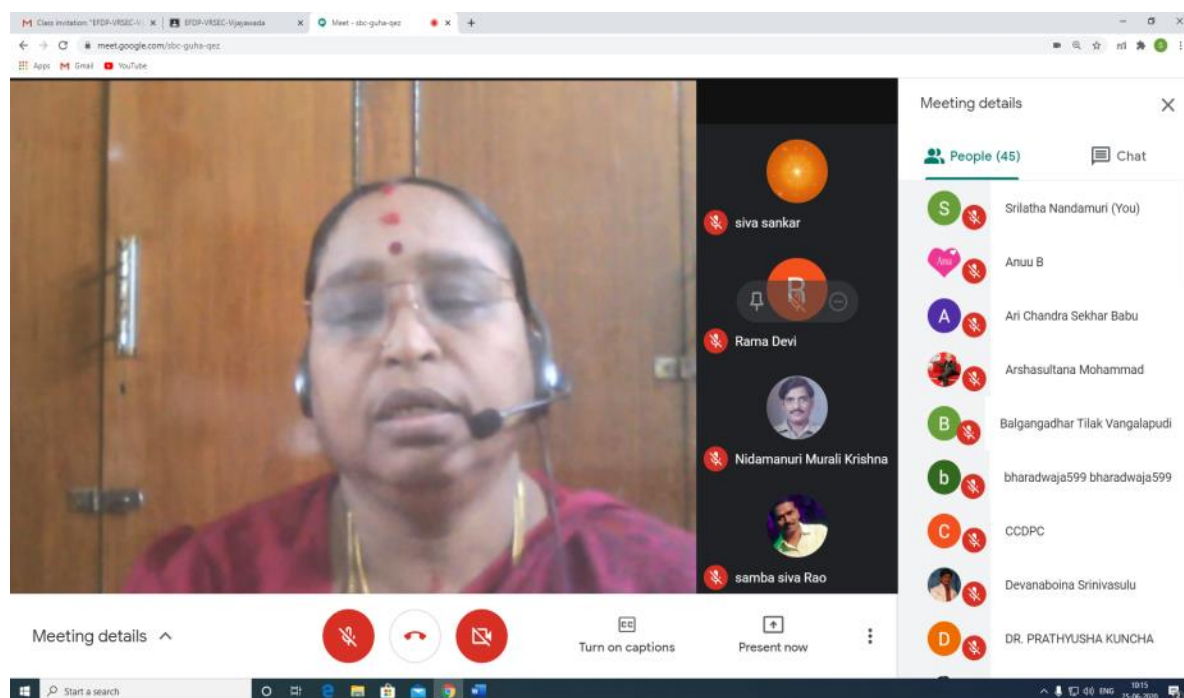
Day 4: 25th June 2020 forenoon:

Speakers:Dr. S. Renukadevi

Topic: Teaching Skills

In this session for the first half of morning session madam had conducted one psychological test, where madam had shown 6 pictures and asked every participant to write the story about 5 to 6 lines. Then speaker asked every participant to prepare the following table consist of achievement motive, affiliation motive and power motive for all six stories.

S.No	Achievement Motive	Affliction Motive	Power Motive
1.			
2.			
3.			
4.			
5.			
6.			

After completing this exercise based on the values of above table, madam had explained the psychology of faculty and the area win which the faculty has to improve their skills. In the

second half of this session speaker explained about different teaching skills like demonstration, chalk board writing, and oral communication.

Day 4: 25th June 2020 afternoon:

Speakers: Dr.K.S.Giridharan, Dr. S. Renukadevi

Topic: Introduction to OBE, Micro Teaching

In the first half of this session Dr. Giridharan sir explained about outcome based education, transition from objective based education to outcome based education, strategies in OBE and explained teaching CAD case study.

In the second half of this session Dr. Ramadevi madam conducted micro teaching for one of the faculty with a recorded video, based on that presentation the suggestions were given to respective faculty. Finally speaker had given suggestion for all participants what are Do's and Don'ts in a class.

Day 5: 26th June 2020 forenoon:

Speakers: Dr. S. Renukadevi

Topic: Evaluation and preparation of Test items

In this session for the first half the speaker had conducted 12 brain storming exercises. In the next half madam had explained the role of evaluation in teaching learning processes, types of

evaluation, tools for valuation of student performance. Next the speaker continued with explaining types of test, how to write an essay type question, what type of options to be included in MCQs, how to give fill in the blanks question and how to assess the reliability of a test.

Day 5: 26th June 2020 after noon:

Speakers: Dr. K. S. Giridharan

Topic: Design of Question paper, Valedictory

In this session Dr. Giridharan sir explained about effective question paper authoring, how to differentiate assessment and evaluation, how to frame a question paper by following blooms taxonomy verbs with a case study.

The valedictory of the program started at 4:00 PM. In this valedictory the Principal of VRSEC, HOD CSE, Director of NITTTR Chennai, all speakers and participants had attended. All the dignitaries addressed about the FDP and some of the participants gave the feedback about the workshop, contents covered and resource persons.
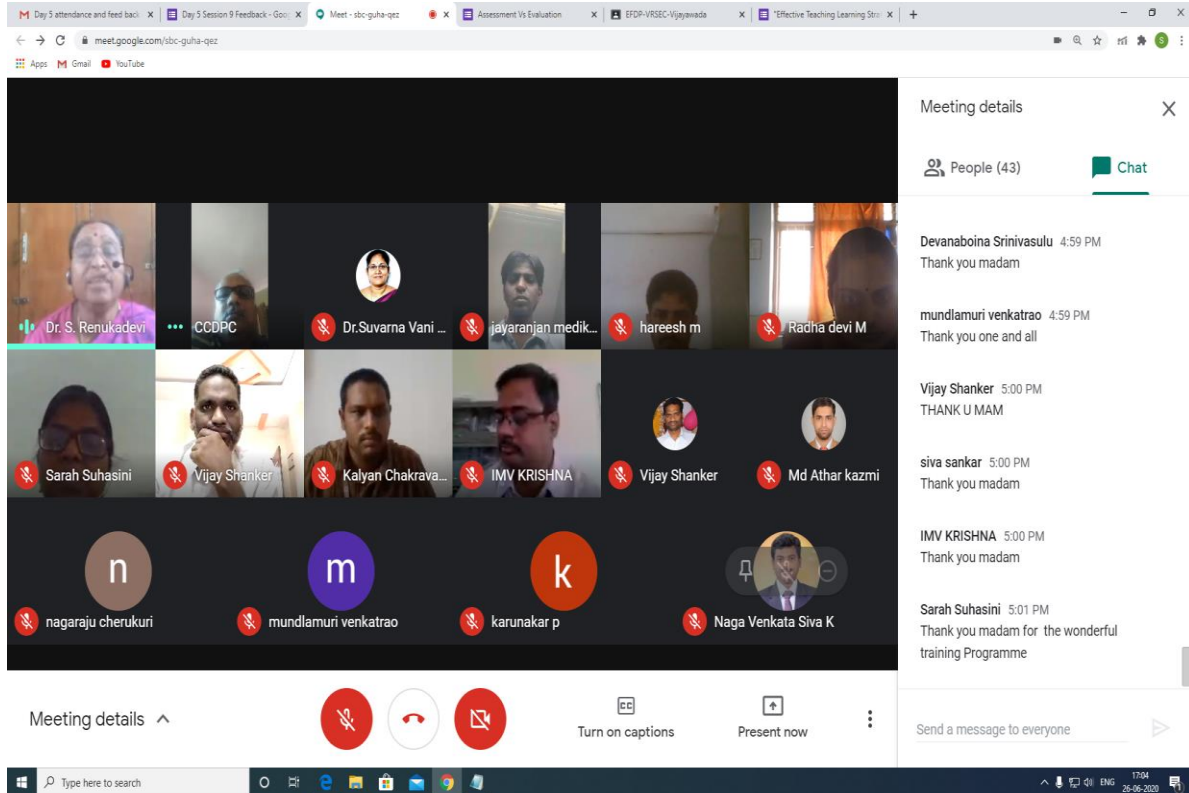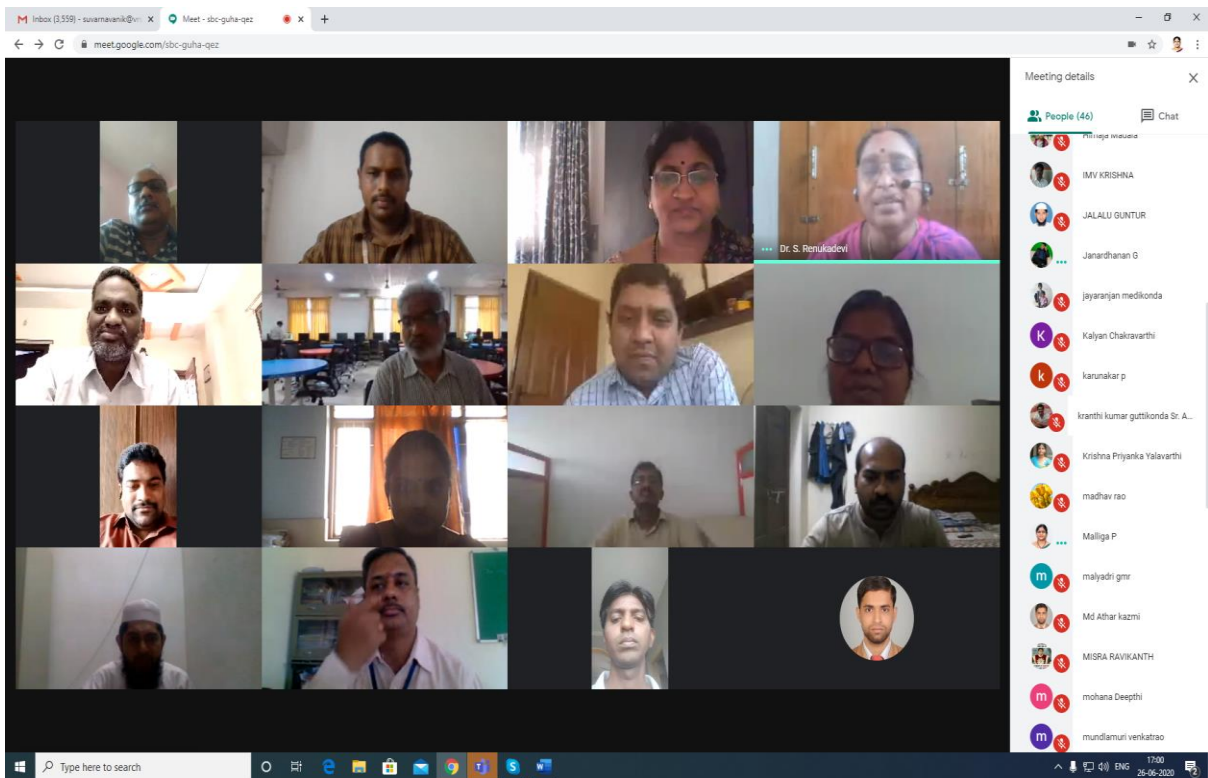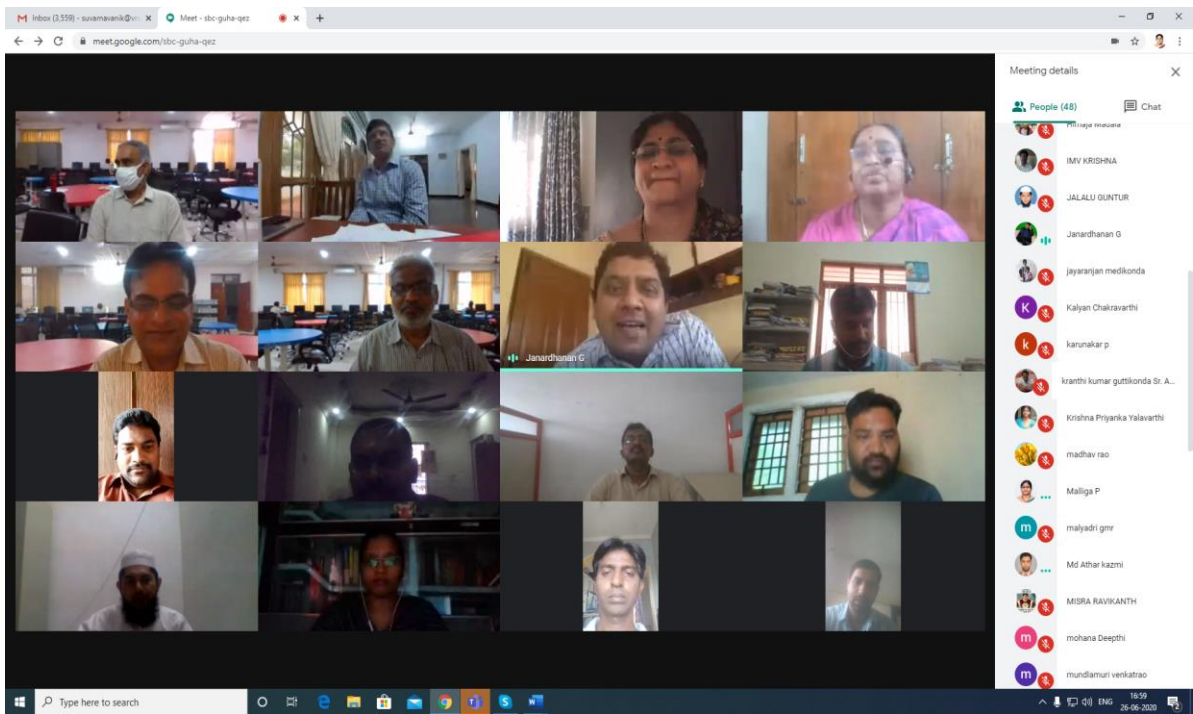

The Principal Dr A V Ratna Prasad, VRSEC was addressing the participants about the FDP and its objectives.
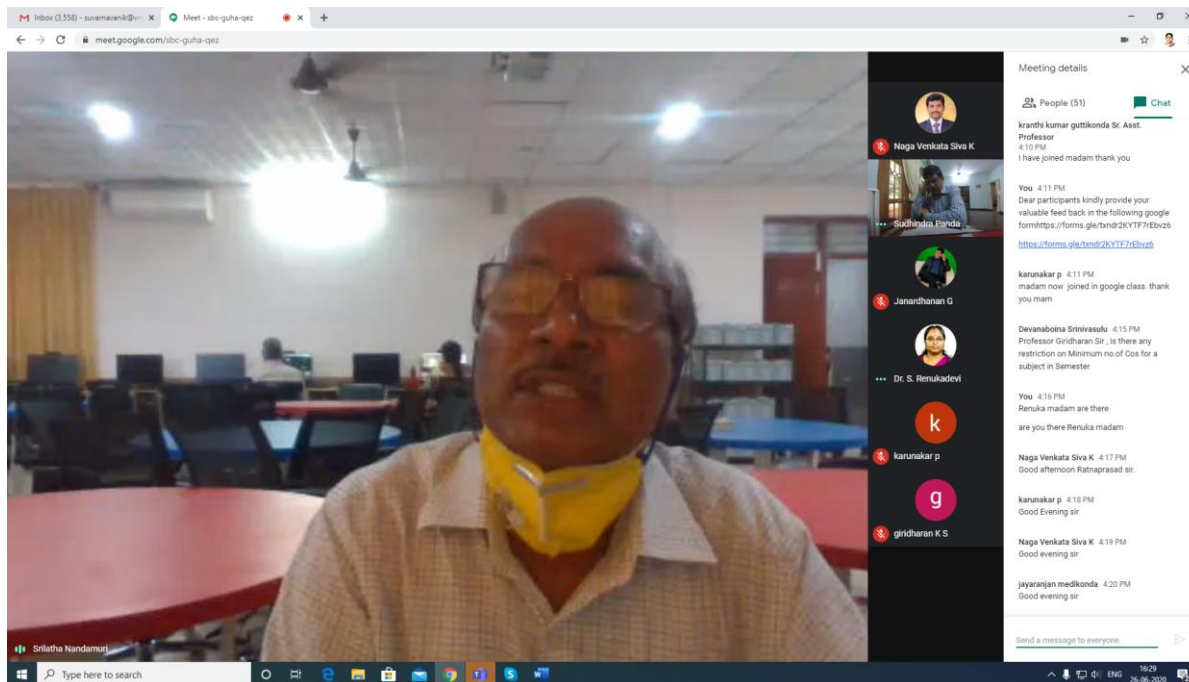
The Director, Dr Sudhindra Nath Panda on NITTTR giving his remarks about the FDP to the participants. He requested all the participants to implement the techniques learnt during this FDP into practice and enhance the quality of their respective teaching learning process.
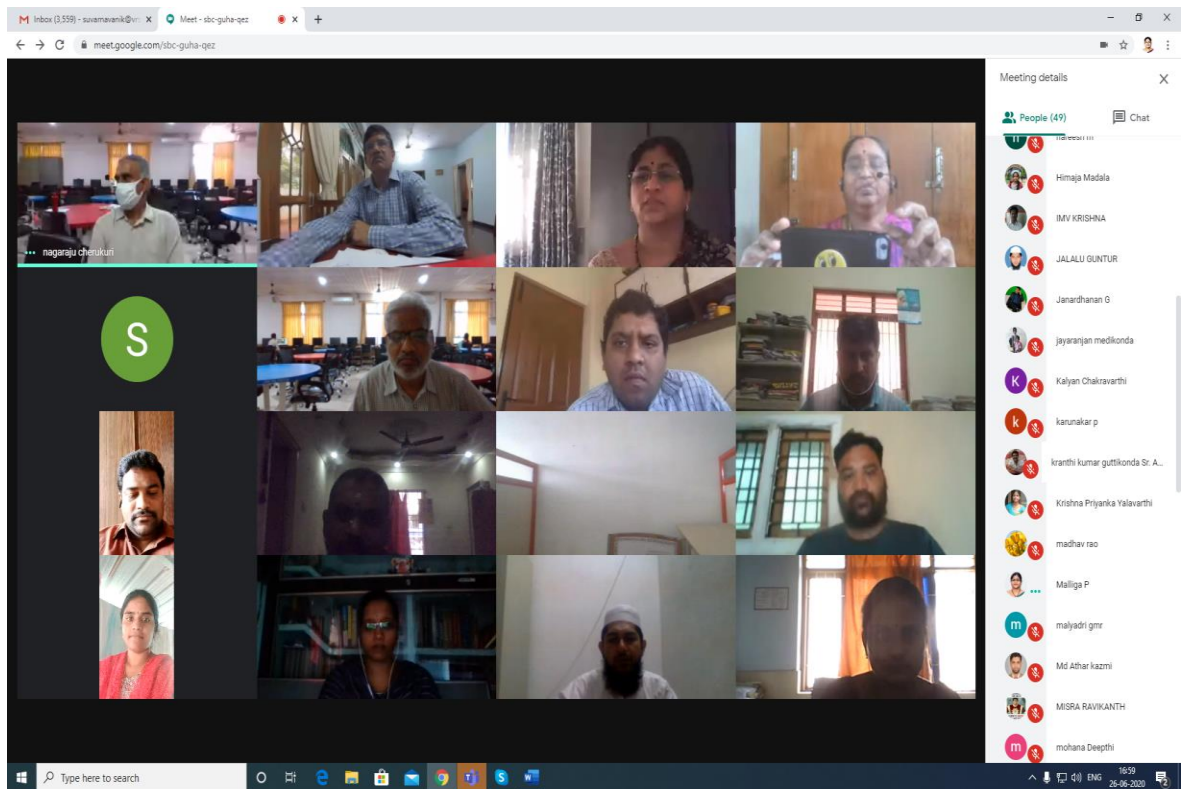
Co-Ordinators	Chief Co-Ordinator	Principal
Dr. K Suvarna Vani	AICTE Margdarshan	Dr. A.V Ratna Prasad
Professor, Department of CSE	Dr. D. Rajeswara Rao	
Ms Srilatha M	Professor & Head	
Asst Prof, CSE	Dept of CSE	