

## Report of Workshop on Research Methodology

Department of Physics of Alva's Institute of Engineering and Technology has organized an A Workshop on Research Methodology (RM-2019) in Science and Engineering during November 21-22, 2019. All the sessions were systematically arranged keeping in mind the need of the research scholars. The first day sessions were on Research Plan/Design, conducted by Prof. Shriganesh Prabhu, TIFR Mumbai and the second day session was on 'Research Problem Selection and Research Process' conducted by Dr. Prakash R Apte, COE Pune. Dr. Ramaprasad A.T was the coordinator of the workshop of the workshop. 24 participants from the various fields were the present during this workshop.

### Day 1

Dr. Ramaprasad welcomed the participants and gave an introductory speech as well as introduced Dr. Shriganesh Prabhu, TIFR, the resource person of day I: Research plan/Design. Dr. Ramaprasad A.T, Department of Physics of Alva's Institute of Engineering and Tecnology felicitate Prof. Prabhu , of TIFR with a Bucky.

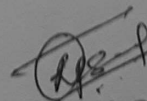


**A Photograph of Research Methodology workshop**

**Day I: Research Plan/Design** was taken by Prof. Prabhu. Prabhu started his session with a brain storming activity. She highlighted different types of Researches – Quantitative, Qualitative and Mixed Method. In quantitative she discussed descriptive, correlation, causal

comparative and experimental. He also talked about cohort study, pre-experimental design, quasi-experimental design and factorial design. In pre-experimental she explained one shot case study, one group-pretest-posttest and static group comparison. In Quasi- experimental Design, He explained non-equivalent control group design and counter balanced design. He focused on numerical data and narrative data. He also discussed the research designs of mixed method study i.e. sequential designs and concurrent designs. Madam has also talked about concurrent triangulation design, concurrent nested design and concurrent transformative design. Apart from this, madam also discussed developmental research and design based research. Session ended with open question answer talk.

**Day II: Research Problem Selection and Research Process** was taken by Dr. Prakash R Apte sir who is an independent researcher. Sir began his session with disciplinary models which are based on applied, soft, pure hard social sciences, arts, humanities and sciences. Sir also highlighted what research is not? He explained that research is not just information gathering, is not rearranging the facts and figures alone and is not playing of words. He focused on what is research? He stresses that research starts with a question or problem, accepts certain basic assumptions, expects critical interpretations, requires unbiased data collection analysis, performs validation, needs articulated documentation and leads to further research. He also talked about types of research i.e. extension or generalization, explanatory (why), description (what, when, who and how), comparative study, life history research, predictive research and evaluation study. He also highlighted online or E- Research. In which he talked about use of research methods to study different aspects of the internet and using the internet to apply research methods for the research questions. Dr. Apte also explained research steps, locating a problem and types of research questions.



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