

At secondary level in Pakistan, Objectives of chemistry are to develop higher order thinking skills and practical skills in students. However, students tend towards rote learning due to inadequate teaching –learning process in the chemistry laboratory. Researches indicate that students come in the lab without any preparation. Teachers do not bother to take care for the learning styles of students. Therefore, Present study was designed to explore the impact of pre-labs in chemistry laboratory at secondary level.

This study aimed at improving the students' understanding about the concepts, theories and laws of science (chemistry) at secondary level and their application in daily life situation. Study also highlighted the effects of pre-lab on academic achievement of the convergent and the divergent students in chemistry laboratory. All secondary schools of Islamabad having science laboratories (chemistry) were the population of this study. Randomly selected two schools (one from boys' schools and one from girls' schools) from the above population was the sample of the study. Data was collected through Cognitive Learning Style (Convergent and Divergent) Test, already developed and used by several researchers. Post-labs developed by the researcher and result of annual examination, conducted by the Federal Board of Intermediate and Secondary Education Islamabad.

Data was analyzed by using statistical procedures (Mean, t-test). Analyses of the data revealed that pre-labs enhanced the achievement of Convergent learner while affected adversely the achievement of Divergent learners in this sample of study. Hence, consideration of learning styles is recommended while introducing the prelabs in chemistry lab.