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Title of the Thesis: Status of ICT Integrated Science Teaching and Learning in DIET: An Exploratory Study

### **Abstract**

The aims of the study were to explore the integration of ICT at the different point of teaching learning process of science subject during the Pre-service programme at DIET. The objectives of the study were to find out the availability of ICT resources in DIETs, to find out the functionality of ICT resources in DIETs, to study the integration of ICT in teaching science by student-teachers' during teaching practice, to study the extent in which and for what purposes ICT is used by the student-teachers' in DIETs and to study the attitude of student-teachers' towards the use of ICT in the teaching-learning process of science. The sample for this study was selected randomly, constituted five DIETs and 200 (forty student-teachers per DIET) student teachers of D.El.Ed. Four self-constructed tools were used to collect data i.e. a checklist was used to find out the availability and functionality of the ICT resources in 5 DIETs; an observation schedule was applied on 200 student teachers to study the utilization of ICT in teaching science by student-teachers during teaching practice; an interview schedule was used to study the integration of ICT in DIET/teaching practice and an attitude scale was used to study the attitude of student-teachers towards the use of ICT in the teaching-learning process of science. The reliability of attitude scale was found to be 0.71 by split-half method. For content validity, the requisite set of tools was submitted to the ten experts to express their opinions on developed tools, though, investigator received

feedback from seven experts. According to the suggestions of experts, some items were modified with respect to language & content and some items were deleted which were not fulfilling the objectives of the present study. The data have been analyzed both qualitatively and quantitatively. Data obtained has been tabulated for the purpose of analysis and interpretation. The investigator analysed the collected data in order to arrive at definite conclusions in the light of the proposed objectives. Hence, analysis and interpretation has been done according to the objectives of the study; In accordance with the nature and purpose of the study and to realize the objectives of the study, qualitative as well as quantitative techniques were implemented for the analyses of data. The result showed that each and every DIET possess ICT resources but at the same time it is reported that DIETs do not possess ICT resources as prescribed by the NCFTE-2009 and 12th five year TE plan(MHRD) for teacher education (2012-2017). So, it can be said that significant number of DIETs that were undertaken in the investigation is lacking in terms of adequate ICT resources also that non functionality of ICT resources made faculties of the teacher education institutions skeptical to motivate their students to integrate the ICT resources in delivery of the content during teaching practice.

It was found that use of ICT resources facilitates the teaching learning process and help student teachers to develop interactive classroom environment, encourages students to use ICT resources even after the class in their day to day life. Moreover, it was also found out that student-teacher have positive attitude towards Integration and use of ICT in teaching-learning process of Science Education.