# Information and Communication Technology in School Education

## Introduction

Technology based education plays a key role in the modern education system and proves to have a deep impact in the education sector. Imparting education has become easier and much more interesting than before in schools with technological advancements.

The Information and Communication Technology (ICT) in Schools Scheme was launched in December 2004 to provide opportunities to secondary stage students to mainly build their capacity on ICT skills and make them learn through the computer-aided learning process. The Scheme is a major catalyst to bridge the digital divide amongst students of various socio-economic and other geographical barriers. The scheme provides support to States/UTs to establish computer labs on a sustainable basis.

## Objectives

Education processes differ among themselves because of the subject of learning, required learning outcomes, previous knowledge, learning styles, culture, industry and many other factors. On the other hand, ICT can be used in a variety of ways in any traditional or new activity.

**After the ICT intervention, the students will be able to:**

- Create digital art and textual materials
- Use e-resources for learning of curricular subjects
- Interact with ICT devices confidently
- Practise safe, legal and ethical means of using ICT
- Develop digital literacy skills that will enable them to function as discerning students in an increasingly digital society
- Access various tools and applications for learning and skill development
- Operate a variety of hardware and software independently and troubleshoot common problems
- Use the ICT facility with care, ensuring the safety of themselves, others and the equipment
- Create a variety of digital products using appropriate tools and applications and saving, storing and managing digital resources.

- Learning assistance: assistance and support for learning and teaching
- New learning: new teaching and learning methods, techniques and tools.

**Implementation status**

Hi-Tech Labs Information and Communication Technology (ICT) is universally acknowledged as an important catalyst for improving teaching - learning process in schools. To equip the students and teachers of Government Schools in Tamil Nadu digitally, 3090 Government high schools have been provided with 10 computer terminals per school 2939 Government Higher Secondary Schools have been provided with 20 Computer terminals per school with the accessories including base lease line connectivity of 1 Mbps speed for high Schools and 2 Mbps speed for Higher Secondary Schools. Usage of these Hi-Tech labs is monitored centrally with the help of a Control Room, i.e., Central Command Centre with connectivity of 100 Mbps speed. **This facility is used for delivery of digital content and digital assessment of the students in government High & Higher Secondary Schools.**

**Expected Outcomes**

- Improves engagement in classroom activities
- Improves knowledge retention for the students
- Encourages individual learning
- Encourages collaboration learning with peer group
- Students can learn useful life skills through technology
- Benefits for teachers to learn innovative ideas

**Key achievement**

Samagra Shiksha has provided training for 2,24,000 government school teachers on ICT and EMIS utilisation through an online live training programme. The Network linked technology infrastructure built in the form of Hi-Tech labs by the School Education Department, Tamil Nadu were the venues where teachers attended the training.

In order to find out the effectiveness of training and the level of understanding of teachers, assessment was carried out to gather relevant

information about teacher's learning outcomes. The features of the assessment are Competency based MCQs classified as easy, medium and hard. Formative assessment at the end of each day based on the content of that day and summative assessment at the end of the 05th day based on the entire training program were conducted.

The quantitative assessment data captured in EMIS helped to determine how well the teachers have achieved a particular learning outcome as well as identify the gap areas of training which need to be focused. The assessments also helped identify teachers who require reinforcement training.

Information and Communication technology (ICT) has become one of the basic building blocks of modern society. The three cardinal principles of access, equity and quality could be served well by harnessing the immense potential of ICT. Relevant use of technology will help to effectively enhance in providing quality education and development of skilled human resources. In this regard government of Tami Nadu has planned to strengthen digital infrastructure in Government High Schools and Higher Secondary schools and Middle schools with a focus to enhance the learning capacities of students in middle, secondary and higher secondary classes.

The State prioritizes setting up of ICT labs 1784 Government Middle Schools and 865 Smart classrooms in Government High & Higher Secondary Schools across the State.