

Abstract:

Despite all the sophisticated modern technology that helps educators impart knowledge, it is a teacher's personal touch that holds the key to unlocking the remarkable potential in every student. Even today, the quality of teaching contributes the most to a student's success in school. The role of teachers, therefore, is more important than ever before. In the digital age, teachers need to keep up with evolving technology, know what digital tools are best suited to their students, and use them effectively in their classrooms. In such a scenario, teachers have no option but to evolve as well. They must update themselves to the modern, thinking-oriented global processes of education if they wish to continue inspiring young minds and equip them with skills that can be valuable in the future. Keeping the above scenario in view, the present study aimed to study the measures taken by the Government of Tamil Nadu in enhancing skills related to digital literacy and also focus on measures taken and difficulties in implementation.

Introduction:

Despite all the sophisticated modern technology that helps educators impart knowledge, it is a teacher's personal touch that holds the key to unlocking the remarkable potential in every student. Even today, the quality of teaching contributes the most to a student's success in school. The role of teachers, therefore, is more important than ever before. In the digital age, teachers need to keep up with evolving technology, know what digital tools are best suited to their students, and use them effectively in their classrooms.

Students of today are gearing up to become global citizens of tomorrow. They are living in a highly-advanced digital age, where the cyber world has superimposed itself upon the real world. The internet and social media have made the world smaller and flatter and transformed mindsets and belief systems. It comes as no surprise then that the processes and trends of education are being transformed dramatically.

In such a scenario, teachers have no option but to evolve as well. They must update themselves to the modern, thinking-oriented global processes of education if they wish to continue inspiring young minds and equip them with skills that can be valuable in the future.

Somewhere, it is also the responsibility of educational institutes to ensure that teachers engage in continuous professional learning and apply that learning to enhance student achievement.

The requisite professional development skills for teaching digital-age students:

Only when teachers acquire contemporary, avant-garde knowledge and new, innovative tools of teaching can they impart 21st-century education appropriately. And this is easily possible now, thanks to highly specialized education academies (both classroom-oriented and online) with comprehensively-structured modules of training for teachers to upgrade their teaching skills.

Digital tools are constantly changing the manner in which teachers teach and students learn. Teachers need to keep up with evolving technology, know what digital tools are best suited to their students, and use them effectively in their classrooms. Virtual reality classrooms, for example, are a state-of-the-art tool that can allow students to experience the entire world from within the confines of the classroom.

The teachers must also have the expertise to help students think critically, be innovative and creative, and sharpen their problem-solving skills.

One can conclude that to empower digital-age students with cutting-edge knowledge and skills, teachers must empower themselves first. They need to enhance their skillsets to global levels and become passionate knowledge-givers who can shape minds and ignite imaginations of future generations.

Measures taken by the Government of Tamil Nadu in enhancing skills related to digital literacy:

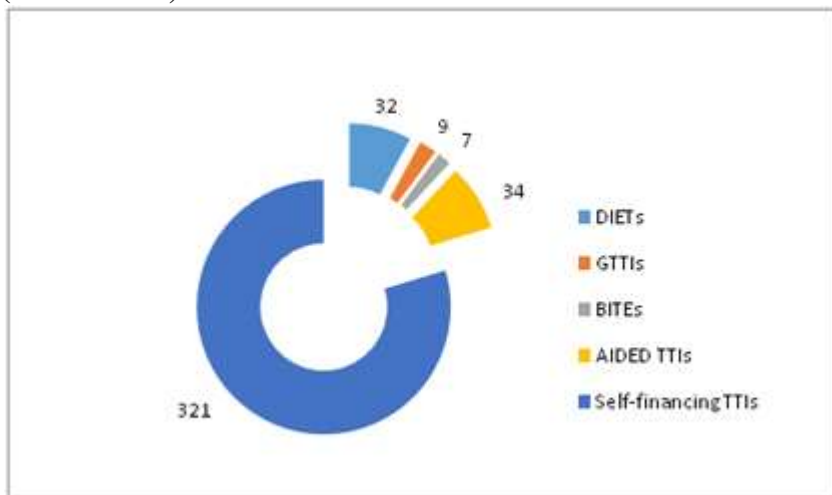
CERT QUALITY PRE-SERVICE TRAINING

TNSCERT has introduced technology-infused infrastructure to enhance learning skill of student-teachers. The student-teachers are given training to handle skillfully the changes in the teaching methodologies, child-centric approaches and computerized learning atmosphere.

The student-teachers are involved in developing life skills like Yoga and Health awareness to enhance their physical activities. They are given opportunity to keep their institution clean and green by organizing cleaning and greening. The student-teachers as well as teachers and students in the vicinity gain innovative science teaching methodologies through the celebration of science week. This activity also enhances scientific attitude of student-teachers.

In Tamil Nadu, under TNSCERT, 32 DIETs, 7 BITEs, 9 GTTIs, 34 Government Aided Teacher Training Institutes, 321 Self-Financing Teacher Training Institutes. Totally 403 Teacher Education Institutions offer Diploma in Elementary Teacher Education Course.

NUMBER OF INSTITUTES OFFERING DIPLOMA IN ELEMENTARY EDUCATION (2017-2018)



Source: TNSCERT DATA

STUDENT ADMISSION IN TEACHER EDUCATION INSTITUTES

TNSCERT introduced single window admission of students to the first year Diploma in Elementary Teacher Education since 2013-2014. This procedure has facilitated students to reach the counseling centers and choose the institutes of their choice on their own. In the last four years, 10,000 students got admission in DIETs and Teacher Training Institutes through this innovative procedure without causing any financial burden to their families.

Enhancing Teacher Competency through Information Communication Technology.

In the era of ever-changing technology, children are much interested to learn through interactive visual medium rather than only hearing because they are attracted towards the touch screen and small screen gadgets. In the 21st century ‘screen age’, children learn better if the content is transacted through attractive visual media. Hence, SCERT has taken sincere efforts to support teachers in the development of e-content which provides wide scope for interactive learning.

Programmes through EDUSAT

SCERT has provided various educational programmes through EDUSAT Video conferencing mode at 58 terminals covering all the 32 districts in the academic year 2016-2017.

Every month EDUSAT programmes are organized for 15 days with 3 hours duration each. The pre-service students of DIETs were benefitted by the various programmes such as Yoga, Child Rights, Value Integrated Teaching and Learning (VITAL), Life Skills, Personality Development, Pre-service teacher education, Communicative skills in English, Image Recognition Application Technology (IRAT), Disaster Managements, Weekly Iron Folic Acid Supplementation (WIFS), Preparation of Continuous and Comprehension Evaluation (CCE) Worksheets and soft skills. 1700 teacher trainees were benefitted through this programme.

During August - September 2016, training on Disaster Management was given to teacher trainees and school students with the help of Disaster Management and Rehabilitation Department. Through this training 1700 Diploma in Elementary Education (D.El.Ed.) students got benefitted.

Further, officials of SCERT review the branch wise functions of DIETs and provide suggestions for strengthening and improving their performance.

The SSA provides information and training for the benefit of resource persons and reviews through EDUSAT. 2500 student teachers of DIETs, 160 Lecturers, Block Resource Teacher Educators and Teachers were benefitted through this programme.

Virtual Class Room

In compliance with the Hon'ble Chief Minister's election manifesto that internet-based learning would be implemented in all High and Higher Secondary Schools in Tamil Nadu, the Government of Tamil Nadu introduced 'Integrated Learning Scheme through Internet' in all high and higher secondary schools in the academic year 2016-2017. Under this scheme, 770 Government High and Higher Secondary Schools and 11 DIETs have been provided with the facility of virtual classrooms. All these virtual classrooms have been inaugurated by Hon'ble Chief Minister in a phased manner. The Virtual Class rooms provide scope for using the best resources by all students who are in remote locations at the same time. Thousands of school children are benefitted by this facility.

Digitization of Text books

The Tamil Nadu Government takes appropriate measures to enable even children with special needs to get quality education with the support of technology. The Hon'ble Chief Minister introduced digitized 10th standard e-books on 01.04.2017. This ensures quality education for all.

About TN DIKSHA



Digital Resources for Teachers and Students

Vision: Enhancing teaching – learning processes using digital resources.

Being at the forefront of digital initiatives in the education sector, Tamil Nadu recognizes the role of good digital content in enhancing teaching and improving learning outcomes. The state therefore made the best use of technology to launch TN DIKSHA, a comprehensive teaching and learning platform that promotes “anytime, anywhere learning”. Teachers, students and parents can now have curriculum-linked digital resources and worksheets curated by the SCERT right at their fingertips.

Tamil Nadu DIKSHA – In Focus

Energized Textbooks

Teaching and Learning Content

Digital Assessments

5.05Cr +Total Scans

2.41Cr +Content Downloads

4.58Cr +Total Content Plays

16.09Lakh HrsHours of Content Played

313 Number of ETB's

9064 Number of QR codes

10533 Number of Digital Resources

Tamil Nadu signed DIKSHA Letter of Participation with Ministry of Human Resource Development. In the first Phase, the online content of the revamped syllabus for Class I, VI, IX and XI per day, the state government's move to digitize the school syllabus has become a huge hit. Students Energized Textbooks for the Academic Year 2019-20 launched. The state rolled out ETB's for the remaining classes (2,3,4,5,7,8,10 and 12) in two mediums (Tamil and English). Each Chapter contained a minimum of 3 QR codes with relevant content for learning and practice.

Despite significant resources allocated to integrating technology in the classroom, many teachers have struggled with disruptions that devices can bring, had their work negatively impacted or have not used technologies effectively. And many pre-service teachers perceive introducing new technologies as a future teaching barrier.

Here are ten reasons teachers can struggle to use new technologies in the classroom.

1. Introduced technology is not always preferred

Technology isn't always the answer. Pre-service teachers have reflected on having preferences for manual writing (compared to typing) and incidences of doubling up on time writing notes. Students can also prefer reading print and teachers can disengage from introducing new technology when they don't feel it adds anything extra.

2. Differing device capabilities and instructions

When students are required to bring their own device to school, there can be large differences in device capability, for example between what a cheap android phone can do compared with an iPad. Students may have difficulty writing on small devices over long periods. Teachers may need to give multiple instructions for many different devices.

3. It's easy for students to be distracted

Students regularly use devices for social media, playing games, instant messaging, text messaging and emailing rather than for class work. Students have been described as "digital rebels" (accessing social media and texting), "cyber wanderers" (succumbing to virtual games) and "eLearning pioneers" (undertaking online studies during class time).

4. Technology can affect lesson time and flow

Lessons are interrupted by regular negotiations that reduce lesson time. This is related to students not putting screens down (during instructions), concealing screens from teachers' view, pretending devices don't work and devices being insufficiently charged. Digital technology training and preparing lessons to include new technologies can also be time consuming.

5. Teachers need more professional development

There are nearly 43,000 teachers in the state of Andhra Pradesh. They need access to ICT improvements for classroom implementation and to keep up with continuous technological advances. This needs to be regular and sustainable.

6. Not everyone has technology at home

Not all students or teachers use a computer at home, are frequent users, have sufficient data or internet access. There is a digital divide of reduced computer literacy in students from Indigenous, lower socioeconomic or regional/rural backgrounds. This creates challenges for teachers if they have to set different tasks for different students, or if they avoid setting homework with a digital component.

7. Teachers need to protect students

Immersion of students in digital technologies has created additional demands for teachers to protect students' behaviour online (safety, legal risks and privacy) and in the classroom (theft and locking of devices).

8. Not all teachers 'believe' in using technology

A wide range of research has established that if teachers don't believe in using digital technologies they will fail to transform classes, align with learning goals and integrate technology into curricular content.

9. Lack of adequate ICT support, infrastructure, or time

Appropriate access to technical support (classroom, informally), availability of infrastructure (computer labs, software), policies (whether to administer digital homework) and time allocated to incorporate new technologies are major challenges for teachers.

10. Tensions between students and teachers

There have been tensions from teachers confiscating “personally owned” devices, difficulties accessing power sockets and when students find information online that conflicts with what the teacher is teaching.

What can we do to overcome these struggles?

There is no single technological solution that applies for every teacher, every course, or every view of teaching. Integrating technology in the classroom is a complex and varied process for many teachers. Meaningful technology integration depends on more than device use. There are important steps to make sure integrating technology aligns with how you teach and what you are teaching.

Professional development has tried to address teachers’ technology struggles. But much of it has been limited to one-shot or “one solution for all” strategies. We need an approach to ICT professional development with different layers to handle the many various situations teachers find themselves in and to handle varied levels of teaching experience and confidence.

Developing a common vision about the role of ICT in education with teachers and creating a shared community of practice is important. Without holistic improvements to teacher support and training that address the many issues teachers face, there’s the risk of creating a generation of ill-prepared students for a digital future.

Conclusion:

The present study describes how the digital literacy is purposeful and how the teachers and the students are benefitted from the root level. As this programme is implemented in government schools, the students from rural background, remote areas are benefitted and they can use the technology in the better way.

Implications:

1. By using video content students can be engaged easily and we can connect from past to future in an impressive way.
2. Infographics that are going to be used through digital technology are useful to visually stimulate students
3. Screen capture videos and tutorials are easily made and can be used by the teachers and the students as and when they requires
4. Web content for classroom learning can be prepared by this technology.
5. Students are provided with task management tools to organize their work and plan their learning.
6. Digital assessment tools are very useful to create quizzes.