



EFFECTS ON LEARNER'S ACHIEVEMENT THROUGH CIET-NCERT

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ABSTRACT

Educational technology constitutes one of the important areas of activities of the NCERT. As premier institute in educational technology, the CIET, a constituent of the NCERT is concerned with the assessment of needs, preparation of audience profiles of different target groups, designing scripts and undertaking production of audio and video programmes. It is also concerned with the production of audio-visual aids and training of State level personnel in the processes and skills of educational technology, including technical operations of studio equipment. It undertakes activities related to research and evaluation, documentation, and dissemination along with consultancy services to various organizations of educational technology. CIET supports educational technology-related activities undertaken by other constituent units of the Council. The CIET also has the responsibility of feeding telecast and broadcasting services viz. Tarang on DD-I and educational channel Gyan Darshan and Gyan Vani. It is responsible for the coordination of transmission of programmes for the school sector along with other sister institutes SIETs. An important area of its activities includes the coordination of the activities of all the SIETs directly and through the Central Preview Committee. The CIET intends to attach greater emphasis on interactive ICT and other technologies in the coming years. It has set up EDUSAT network for videoconferencing on selected 100 locations across the country. This network is to be utilized for extending training to different target groups and helping sister organizations in this regard.

KEYWORDS: CIET-NCERT, SIET-NCERT, EDUSAT.

INTRODUCTION

Central Institute of Educational Technology (CIET), an autonomous organization under the Ministry of Human Resources Development (MHRD), Government of India (GoI) located at NIE Campus, NCERT in New Delhi, a constituent unit of National Council of Educational Research and Training (NCERT) and a premiere national institute of educational technology came into existence in the year 1984 with the merger of Center for Educational Technology (CET), 1973 and Department of Teaching Aids (DTA), 1959. Its major aim is to promote utilization of educational technologies viz., radio, TV, films, Satellite communications and cyber media either separately or in combinations. The institute undertakes activities to widen educational opportunities promote equity and improve the quality of educational processes at the school level. The major functions and areas of the CIET-NCERT are based on:

1. Research and Development
2. Training
3. Extension and Dissemination functions

Major Functions of CIET-NCERT

1. To design, develop, try out and disseminate alternative learning systems to achieve the national goals of universalization of elementary and secondary education.
2. To address various educational problems at micro, meso and macro levels.
3. To promote and train personnel in educational technology.
4. To advise & coordinate activities of SIETs.
5. To provide Consultancy and media support to other constituents of NCERT.

Areas of Activities of CIET-NCERT

1. To act as a nodal resource center for school education media software acquired through national, regional, and international sources for reference and research.
2. To achieve excellence in design, research, and production of educational software for children and teachers, including parents and to contribute to teacher education through the convergence of appropriate technologies.
3. To design and produce media software materials viz., television/radio (for both broadcast as well as non-broadcast use) graphics and other programmes for strengthening the transaction of curricular and co-curricular activities at the school level.
4. To build capacities of teachers/educators for quality improvement roles in school education.
5. To inform educational policymakers to critically appraise educational technology (ICT related) policy in India.
6. To create competencies in the development and use of educational software materials mentioned above through training in areas such as:
 - script development
 - media production, communication, and research
 - technical operations
 - setting up studios, repair, and maintenance of equipment
7. To develop plans for the use of Information and Communication Technologies (ICTs) in education.
8. To train the faculty of Institutes of Advanced Study in Education/Colleges of Teacher Education and District Institutes of Education and Training (DIET) in the use of Educational Technology in their teacher education programmes.
9. To undertake research, evaluation, and monitoring of the systems, programmes and materials to improve the materials and increase their effectiveness.
10. To document and disseminate information, materials, and media programmes for better utilization and to function as a clearinghouse/agency in the field of Educational Technology.
11. To advise and coordinate the academic and technical programmes and activities of the State Institutes of Educational Technology (SIETs) set up by the MHRD in states of India.

CIET- NCERT Conducts its Activities and Programmes through Six Divisions

1. Media Production Division: This division is divided into two divisions is produced in two languages English and Hindi.

i. Audio Division: Educational technology is playing a significant role around school education. The demand to produce audio/radio programs has considerably increased during the last couple of years. Today the Gyanwani - Educational FM channel is operating at more than 40 stations and Broadcasting audio programs produced by CIET. These major Gyanwani FM stations are Delhi, Lucknow, Bhopal, Patna, Indore, Mumbai, Jaipur, Allahabad etc. To cater the requirements of the existing program, the CIET has been producing audio programs for broadcast as well as for non- broadcast modes. These programs have been developed in such a way that they could easily be incorporated into the day-to-day learning experiences of school and not school-going children. They can be used in the classroom as well as at home. These programs are also useful to the teachers as exemplar material in areas not elaborated in the textbooks but a part of the curriculum. These are packages specially meant for the teachers. The

Audio Production Division is dealing with the Production of Audio programs for children of all the age groups viz.

1. 3 to 6 years
2. 5 to 8 years
3. 8 to 11 years
4. 12 to 14 years
5. 15 to 16 years

The programs are catering to the needs of all areas of Education such as,

1. Preschool/Elementary/Secondary/Senior Secondary Education
2. Science Education and Mathematics
3. Social Sciences and Humanities
4. Teacher Education and Extension
5. Education of Groups with Special Needs
6. Women's Studies
7. Value Education

The audio division has developed year-wise Audio Programme Production, currently, Audio Programme Production, 2010-11 produces about 100 educational Audio programmes in a year apart from the live broadcast on Umang on www. These programmes are curriculum-based and broadcast from 14 Gyan Vani Centers for the North India Hindi Speaking Belt namely: Allahabad, Bhopal, Indore, Mumbai, Kanpur, Lucknow, Delhi, Patna, Raipur, Jabalpur, Jaipur, Varanasi, Agra, and Chandigarh. These programmes are made available from CIET- Audio Division Sale Counter. The Audio Programme Plan and Audio Video Library of Audio-Video Division of CIET are in the development phase to date.

ii. Video Division: The Media Production Division (MPD) produces the high-quality Educational Audio - Video programmes for the school going children (age 5 to 18 years) and teachers (primary and secondary). The division conducts its programmes with the help of the teams of enthusiastic and qualified producers, cameramen, floor managers, floor assistants as well as light men etc. This division has four subdivisions namely:

a. Camera: This subdivision has the Photo Unit and the staff working in photo unit assists the council in recording activities & news of Constituent Units of NCERT and CIET. The seminars, research workshops, Conferences, Sports events, cultural programs, still photography of T.V. Production activities is around the year exercise conducted by Academic staff and Media unit of CIET. The still pictures are stored on CD for future use by NCERT for the purpose of publishing Newsletters & Annual Reports. The still photographs are put up on Website of CIET disclosing differential activities taking place around the year.

b. Graphics: The subdivision supports video production through the computer graphics, animations, and other such inputs. It works through its lab, which is well developed.

c. Scenic: This subdivision assists the producers in designing and creating appropriate sets for the programmes, also the wardrobe and property are created and maintained by this subdivision.

d. Puppets: This subdivision designs and develops various types of puppets which are used in video production. The subdivision also conducts training programmes on 'Puppets in Education' for the teachers of the primary. Recently a 3-day's workshop was organized for the teachers at Demonstration Model Schools (DMS) at Regional Institutes of Education (RIEs) of NCERT. These Puppet shows are based on social and environmental messages. Now a day, there is a great need to make children sensitive about socially relevant issues. Sh. Ramdas Padhye, an eminent personality in the world of puppet, presented four programmes in a fascinating, humorous manner. A brief introduction of the above programmes is as follows:

- i. **Apne Ko Pehchano:** In this world every existence is unique. There is a need to recognize one's own abilities and capabilities.
- ii. **Pade Bachao:** The theme of the programme is to save trees as the trees are the most important aspect of our environment. This Programme focuses on the burning issue of 'Save Trees'.

- iii. **Jeene ka Dhang:** To be successful in life, one needs to inculcate good habits from the very childhood. This programme 'Jeene Ka Dhang' highlights the importance of good habits in our life.
- iv. **DhartiInkiBhi Hai:** The Mother Nature en-composes in itself the enormous beauty to appreciate. This programme 'DhartiInkiBhi Hai' motivates children to appreciate as well as respect that beauty.

The programmes are telecast through National Telecast (DD) as well as Gyan Darshan Channels and they are also made available on CD/DVD formats to the students, teachers as well as the public. The division produces about 200 educational video programmes in a year apart from Live Telecast programmes of 3 hours per week on Gyan Darshan 1 from 3:00-4:00 pm, DD 1 and DD Bharti. These programmes are made available from CIET-Video Division Sale Counter. The video division has developed year-wise Video Programme Production; currently, its organized Video Conferencing programmes in the year 2009-10 through EDUSAT for 52 days.

Planning & Research Division:

The division looks after the following activities:

- Planning of Programme and preparation of agenda items of CIET for Institutional Advisory Board (IAB) and Programme Advisory Committee (PAC) meetings of NCERT.
- Implementation and monitoring of all the academic programmes duly approved by the IAB and PAC- NCERT, PAB of Department of School Education and Literacy (DSEL), MHRD- GOI or any other National/International funding agency.
- Establishing linkage and collaboration with MHRD, SIETs located in States i.e., Andhra Pradesh, Maharashtra, Odisha, U.P., Gujarat and Kerala and Educational Technology (ET) cells of SCERTs/State Institute of Educations (SIEs). Organizing meetings of CIET- SIETs Coordination Committee from time to time.
- Compiling and sharing of monthly, quarterly, and annual reports of academic activities of CIET.
- This division is entrusted with the activities related to planning, conducting, and disseminating research. It also is expected to conduct training in various aspects of research in educational technology.

Department of Information and Communication Technology (DICTs) and Training Division:

The Department of Information and Communication Technologies, CIET, in collaboration with Training Division broadly works for:

- Creation of multimedia materials for students and teachers.
- Imparting training on the use of ICTs in teaching-learning process and Research Methodology for ICTs in Education etc. for teachers and teacher- educators i.e., schools, DIETs, CTEs, IASEs, SIETs, SCERTs/SIEs, faculty from Education Departments of Indian Universities.
- Faculty training on ICTs in education including Web 2.0 Tools, Wiki/WikiEducator, MacLab and Robotino, Development and Use of Open Source Materials etc.
- Innovations in ICTs in Education.
- Dissemination and extension of ICT resources among schools, students, and teachers in every corner of the country is the motto of the Division.
- Continuous updating and maintenance of CIET website.

The division looks after the training activities of CIET. The broad activities taken up by CIET under the umbrella of training function includes:

- i. Training programme for capacity building in various aspects of educational technology ICT for teachers and teacher educators of the country.
- ii. The training/orientation with special focus on designing of media scripts, production of TV, Radio and Multimedia programme, editing, communication and media research, designing ICT in

- education and learning and use of computer graphics, puppets, moppets, low cost teaching learning materials etc.
- iii. Training on recent ICT initiatives, Web 2.0 tools, Wiki Educator, and various web applications.
 - iv. Training on technical operations including setting up of studios, installation, and operation of studio equipments, repair and maintenance of equipments etc.
 - v. CIET undertake such training programme for the stake holders from various schools, SIETs, DIETs, SCERTs/SIEs, CTEs, IASEs, NCERT faculty, DMS, RIE teachers etc.
 - vi. Attachment training programme for students at various Universities and national Institutes as part of their internship project.
 - vii. Organizing training programme through face-to-face and distance mode (using satellite network and web technology).
 - viii. Concerned in conducting assessment of training needs, development of training materials and follow up studies.

Engineering Division: This division is an important division of CIET as it looks at all the technical facilities provided to produce the educational audio-visual programme. It involves Senior Engineers, Assistant Engineers, Engineering Assistants and Technicians as well as other staffs. CIET has the state-of-the-art production facilities and the quality products are produced because of constant up-gradation and proper maintenance of the equipment. Presently, it is upgrading its audio and video studio equipment and installing server-based production facilities. This division involves:

1. Television Studio: CIET has two television studios of different sizes for indoor recording. The studios are fully air-conditioned and acoustically well treated. Both the studios are designed as per broadcast standards. Both the studios have separate Production Control Desk, Audio Control room, Video Tape Recording room and lighting consoles. Out of two television studios, one is bigger in size and has more height. In this studio, the lighting grid is controlled by a motorized panel. The technical facilities provided in these TV studios are independently controlled through separate consoles, installed in different control rooms. Various types of modern, sophisticated studio lights are provided at every corner of the studio.

2. The Sound Studio: It mainly consists of three units:

- **Digital Audio Studio (Music Studio):** It has facilities for Digital and Analog recording. The studio maintains the broadcast standards of reverberation time and acoustical treatment.
- **Digital Audio Editing Console:** Nuendo software is used for editing audio programmes. The Software provides the facility to work on upto 64 tracks.
- **Analog Audio Studio and Analog Audio editing console (Talk studio):** Talk studio has analog recording facility. The studio has got broadcast standard reverberation time and soundproofing. Analog audio recording, editing, and mixing are done on this console.

3. SENG-Outdoor Recording Unit: TPOM maintains six units of ENG outdoor recording with three different formats:

- XDCAM format: 3 units
- Betacam format: 2 units
- Mini DV format: 2 units

All the above units are equipped with portable lights, color monitors and other related accessories.

1. Video Editing System: CIET is equipped with non-linear video editing systems. CIET has four non-linear editing setups. The consoles are Apple Macintosh-based with FINAL Cut Pro (FCP) the editing software™. This software facilitates to work faster with numerous special effects. All the editing nodes server are networked with 16 TB servers where its raw footage is integrated for editing.

2. Audio Video Digitization console: CIET has a sale mechanism through which the audio and video programmes are made available on sale in CD/DVD format. These CDs/DVDs are developed for all the archived programmes and new audio/video programmes are in this console.

3. EDUSAT Studio: An independent TV studio is functioning for video conferencing. The Three mini camera setup has been established in this studio. The whole system is controlled through the adjacent

control room. The CIET conducts its Video-conferencing programme through Educational satellite launched by ISRO. CIET has set up in-house teaching end at CIET studio and 100 SITs (Satellite Interactive Terminals) as classrooms all over India. The teachers participate in the classroom end, interacting with the experts at the teaching end. These SITs are set up at SCERTs, SIETs, Kendriya Vidyalayas. National Institute of Open Schooling (NIOS), Tibet Schools and Navodaya Vidyalaya. Presently, Indian Space Research Organization (ISRO) has setup hub center at CIET for catering to the audio-video interactive sessions. This Mini Hub has provided high-quality interaction between teaching end and classroom ends. The CIET utilizes the EDUSAT, the first Indian satellite exclusively for the educational sector. It utilizes a Ku- band Sub Hub along with 100 terminals at various locations in India for conventional radio and television broadcast, interactive radio and television (phone-in and video on demand), exchange of data, audio, video and computer conferencing and web-based education.

4. Other Facilities:

a. Conference Halls: CIET has two conference halls fully equipped with public address system, LCD projectors playback/recording facilities for audio/video and one lecture Hall with LCD projectors facility.

b. Preview Room: CIET also has a separate preview room having facility for playback of audio/video on different formats.

c. Central Storage Server: Recently, CIET has procured Central Storage Server. All equipments like editing consoles, output from Studios, Graphic rooms are connected to the Server. Audio/Video programmes stored in various other recording media are installed for Proxy Editing, digitized, and archived in the server. Five numbers of Low Browsing Systems are being installed for Proxy Editing.

5. Media Resources Dissemination Division: Each division has a specific mandate, and it works towards achieving the goals set by the division and the CIET in general. Each division plans its programme (as well as that of the individual member of the division) sometime in January-February of each year and on getting them approved through the Institute's Advisory Board (IAB) and then through the Programme Advisory Committee (PAC) of NCERT works towards completion of the same.

Projects of CIET-NCERT

CIET is working on various current projects since the years 2014-15 & 2016-17, the list of ongoing projects is as below:

1. Integration of ICT in Teaching and Learning Process A Qualitative Study.
2. Analysis of Trends in ICT in Education.
3. Teacher's reflections on classroom pedagogical practices: Analysis of videos.
4. A study of ICT-Pedagogy integration approaches adopted by nominees of National ICT Award for School Teachers from 2010 to 2015.
5. Development of Educational Media Programmes.
6. Development of Support Materials for Video Programmes in Social Sciences at Secondary Level.
7. Development of Support Materials for Video Programmes in Social Sciences at Secondary Level.
8. Development and Management of National Repository for Open Educational Resources (NROER).
9. e-Pathshala
10. Development of Resources and Support for Web and Online Activities.
11. Online Course on Evaluation of ICT in Education.
12. Implementation of ICT in Education Curriculum in the states of Assam and Meghalaya.
13. Organization of National ICT Award for School Teachers 2015 & 2016.
14. Organization of contests, festival, ICT Mela, and coordination with States/UTs.
15. Dissemination of Educational Media Programmes.
16. Dissemination of CIET Activities among Students, Teachers & Teachers Educators of Different Educational Institutes in Rural Areas
17. Capacity Building Programme for KRPs in Biology and ICT in Teaching of Science at Senior Secondary Level at all India.

18. Development of DM Schools as Model Schools for ICT Pedagogy Integration.

19. ERIC

20. e-PG Pathshala Project Allahabad University.

21. Specific Grant MOOCs, UNESCO, Swayam Prabha and ICT Mela.

Resources of CIET-NCERT

I. Accessibility in School Curriculum-NCERT's Initiatives includes: NCERT textbooks cover inclusion and accessibility comprehensively across school stages and subjects in natural and integrated manner include:

- Focus on accessibility NCERT Textbooks across school stages and subjects in natural and integrated manner.
- Development of 'reading series for all' based on the principles of Universal Design of Learning (UDL) and Inclusive Education (IE).
- Development of Exemplar Help books of Primary and Upper Primary Level.

II. Barkhaa: It is a 'Reading Series for All' based on UDL & IE principles and includes:

- 40 sets of story booklets in print and digital forms.
- Promotes reading for all in inclusive settings and sensitizes on accessibility concerns during the foundational years.
- The silent features of Print form include:
 - a. Braille and text on same page.
 - b. Visuals with tactile and embossed features.
 - c. Visual in high resolution.
 - d. Picture windows with real pictures of difficult words in text and Braille.
- The silent features of Digital form include:
 - a. Assessed on computers, laptops, mobile phones and tablets.
 - b. Retain all the features of Print form.

The innovative exemplar series provides guidelines for developing supplementary learning material and textbooks with a focus on accessibility for all.

III. Sign Language Video Programmes: The various sign language video programmes prepared by CIET based on school curriculum are namely: Coocon se reshamtak, Jantavraisheaurjanturaishe, Natural indicators, Tropical Rain Forest specially-abled, Acid and base etc.

IV. Tactile Map Book: For Upper Primary Stage, the Tactile Map Books includes, 25 maps and diagrams, Braille, and English text for encouraging collaborative learning and Audio Map Books in Daisy format (in Hindi and English).

V. Development of Exemplar Handbooks: Such handbooks are developed for teachers e.g.; Teachers working in inclusive setting and focus on adapting the curriculum while teaching children with varying needs: including children with special needs (Primary and Upper Primary stage: Hindi and English language).

VI. Audio Books: These books are meant for:

I. Lower Primary (Grade I-V): Rimjhim and Marigold are the audiobooks.

II. Upper Primary (Grade VI-VIII):

a. Grade VI Audio Books: Ruchitra I, Doorva I, Vasant I, A Pact with Sun, Honey Suckle, History Kasturba Gandhi Vidhyalay, ItihaasakRomachakGaatha and ApniZaban.

b. Grade VII Audio Books: Ruchitra II, Doorva II and Vasant II.

c. Grade VIII Audio Books: Ruchira III, Doorva III, HamareAteet and Vasant III.

III. Secondary (Grade IX-X)

a. Grade IX Audio Books: Beehive, Moments, Kritika I, Kshitij I, Sparsh I, Sanchayan I, Bharat AurSamkaleen Vishwa I, LoktantrikRajniti I, Gulzare-e-urdu, Arthshastra, Shemushi I, Contemporary India1, Samkaleen Bharat-1 and Nawa-e-Urdu Part 1.

b. Grade X Audio Books: Footprint Without Feet, Kshitij II, Kritika II, LocktantrikRajniti II, First Flight, Arthik Vikas Ki samajh, Bharat AurSamkaleen Vishwa-II, Nawa-e-Urdu Part 2, Gulzar-e-Urdu, Contemporary India, Moments, Samkaleen Bharat II and Shemushi II.

IV. Higher Secondary (Grade XI-XII)

a. Grade XI Audio Books:Antraal I, Vitaan I, Hornbill, Aaroh and Woven Words.

b. Grade XII Audio Books: Vitaan II, Aaroh II, Antraal II, Flamingo, AbhiwiyaktiAurMadhyam and Kaleidoscope.

V. Read Aloud Books on e-Pathshala and e-Pathshala mobile app text to speech are also available

1. Booklet on Cyber Safety & Security of CIET-NCERT Resources involves:

- a. Guidelines for Schools
- b. Do's & Don't for teacher
- c. Do's & Don't for Students
- d. Cyber Safety and Security
- e. Handbook for adolescents/students on Cyber Security by Ministry of Home Affairs (MHA).

2. **Brochure and Bookmarks on ICT Initiatives of NCERT focus on:**

a. Brochure

1. National Repository of Open Educational Resources (NROER): Access of 18,000 e-Resources.
2. e-Pathshala: e-Books in the form of Flipbooks and PDF
3. SWAYAM
4. SWAYAM PRABHA
5. ICT Curriculum: Enhances ICT Schemes
6. Cyber Safety and Security
7. NISHTHA: Access Teacher Training Module at elementary level
8. DIKSHA: Access E-Books and e-Content of NCERT

b. Bookmarks

1. National Repository of Open Educational Resources (NROER)
2. e-pathshala
3. SWAYAM
4. SWAYAM PRABHA
5. ICT Curriculum
6. NCERT Textbooks: Access PDF versions of NCERT textbooks.
3. CIET works on the preparation of the reports based on research, training and extension services provided to schools of states in India, newsletters, catalogues, development of e-content guidelines for school learners and evaluation by the experts and the various comics on 'Conservation of Environment' - PCRA & NCERT in the Hindi language for the learners in the form of PDF and Flipbook year- wise.
4. A special U-tube portal of CIET- NCERT official is working on the preparation of videos based on the contribution of Mahatma Gandhi in India includes the songs, stories, and discussion on themes like:
 - a. Vaishnav Jan to TeneKahiye.
 - b. AaoSair Kare Rajghat, AaoSuir Kare Sevagram, AaoSairkare Porbandar etc.
 - c. Rajneeti me Gandhi ji Ki ahimsa, Mahatma Gandhi in South Africa, Gandhi ji aurjeevanMulya, Champaran me Gandhi ji ka Agaman etc.
 - d. Bahurup Gandhi Nilamwala, Bahurup Gandhi Hakim, Bahurup Gandhi Shikshak, Bahurupi Gandhi Senapati etc.
 - e. Discussion on Quit India Movement, Civil Disobedience Movement, SavianayaAvagyaAdolan, Bharat ChodoAndolan etc.
 - f. Kastuba Gandhi, Savarmati Ashram Gandhi Ashram etc.
5. CIET- NCERT is publishing a bi-annual online journal on educational technology; Indian Journal of Educational Technology (IJET), an Open Access Journalin January & July every year in the English languagecomprised of the themes:
 1. Education Technology (ET).
 2. Information and Communication Technology (ICT) in education.

3. Distance education and technology.
4. Technological integration into pedagogy and content.
5. Open Educational Repositories (OER) and FOSS.
6. Innovation in the educational system.
7. Computer-based learning.
8. Audio-video and multimedia in education and issues thereof.
9. Technology cognition and curriculum.
10. Impact of technology in education.
11. Nature of technology and learning.
12. Mobile learning.
13. Learning through social media.
14. Technology-assisted evaluation systems.
15. Technology support for differently abled population.
16. Flipped classroom, virtual and augmented reality, artificial intelligence, robotics and education digital games, toys, simulations, digital books, and education.
17. Impact of technology on learning.
18. Social media and children.
19. Economics of technology and its impact on education system.
20. Socio-psychological, ethical dimensions of technology and technological transfer.
21. Educational Technology in smart governance and delivery of digital contents.
22. Educational planning administration and technology.
23. Online courses for school and teacher education
24. The nature of articles in the journal is of Editorial Research articles, Review articles, Opinion, Communications, Book Review, Correspondence and News/Seminar/Conferences.

6. Libraries: The CIET- NCERT maintains three libraries, each dedicated to audio, video, and book collections. The library is stocked with contents on educational technologies, radio, television, communication, films, multimedia in the form of books, journals, CDS/DVDs and multimedia packages. The library is open to outside visitors, too.

7. UNESCO Resources: With collaboration with UNESCO, CIET organizes the national and international ICT conferences every year. For an example as the Digital India Programme of the Government of India envisions:

- i. Digital infrastructure,
- ii. Governance and services on demand and
- iii. Digital empowerment of citizens.

To promote such visions of the GoI, NCERT in collaboration with (i) UNESCO - International Bureau of Education (IBE), Geneva and (ii) UNESCO - International Institute of Technology for Education (IITE), Moscow organized an International Forum/Workshop on 'adopting ICT Perspective to Education and Learning' in New Delhi from October 31st, 2016 to November 4th, 2016. Shri Upendra Kushwaha, Honourable Minister of State for MHRD, GoI inaugurated the Forum on October 31st, 2016 at the Ashok, Chankyapuri, New Delhi and the subsequent activities held at CIET, NCERT, New Delhi. The Forum targeted the countries which are implementing the UNESCO's General Education Quality Analysis Framework (GEQAF). The Forum sessions designed to be interactive and build on concrete cases of ICT integration. A host of countries participated in this Forum along with several stakeholders from India.

8. Access NCERT MOOCs on SWAYAM: NCERT is an autonomous organisation set up in 1961 by the GoI to assist and advise the Central and State Governments on policies and programs for qualitative improvement in school education. The major objectives of NCERT and its constituent units are to:

1. Undertake, promote, and coordinate research in areas related to school education.
2. Prepare and publish model textbooks, supplementary material, newsletters, journals and develops educational kits, multimedia, digital materials, etc. organize pre-service and in-service training of teachers.

3. Develop and disseminate innovative educational techniques and practices.
4. Collaborate and network with state educational departments, universities, NGOs, and other educational institutions.
5. Act as a clearinghouse for ideas and information in matters related to school education.

In addition to research, development, training, extension, publication, and dissemination activities, NCERT is an implementation agency for bilateral cultural exchange programs with other countries in the field of school education. The NCERT also interacts and works in collaboration with the international organizations, visiting foreign delegations and offers various training facilities to educational personnel from developing countries. NCERT also does development and dissemination of quality e-content. For providing content enrichment and continuous professional development of teachers, NCERT has been developing online courses. Till date, about 28 online courses have been developed and rolled out through SWAYAM platform of MHRD, GoI.

Events of CIET-NCERT

1. ICT Awards: CIET organized the national ICT awards for the centrally sponsored scheme of Samagra Shiksha Abhiyan/Sarva Shiksha Abhiyan for schoolteachers every year and the awards are given in the following criteria:

a. Facilitate to those teachers (Primary, Upper Primary, Secondary and Higher Secondary school of KVS, NVS, CBSE, Council for the Indian School Certificate Examinations (CISCE), Central Tibetan Schools Administration (CTSA), Atomic Energy Education Society (AEES) and Sainik School under Ministry of Defense (MOD), State Govt. schools and the school run by local bodies and Govt. Aided Schools) who enhanced student learning by effectively and innovatively integrated technology-supported learning into the school curriculum and subject teaching (including the criterion of e-content for Diksha/NROER etc.) and thereby promoted enquiry-based cooperative-collaborative learning using ICT among their students.

b. Check the teacher's awareness and use of ICT in his/her own professional development in improving his/her teaching-learning and in enhancing the overall quality of education in schools and community, support in the development of higher-order thinking skills among students, the various assessment strategies adopted in the regular classroom teaching which indicate the impact of ICT use, the way to help the students to use ICTs for self-learning, investigation and experiments etc.

c. The systematic work of teachers using ICT over the years related creation, duration, sharing, dissemination/use of digital contents for students, teaching-learning and assessment includes the relevant supporting documents, tools, reports of activities, field visits, photographs, audios and videos. E-contents listed in the portfolio (Audios, Videos, Multimedia, Charts, Maps, Model lesson plans and images) to be uploaded/shared online. e-Contents developed by teachers uploaded on DIKSHA, NROER, etc.

d. Allocation of Awards

(i) Three awards for each large State ($14 \times 3 = 42$, Defined as States having teacher strength of 1 lakh or more)

(ii) Two awards for each small State ($14 \times 2 = 28$, Defined as States whose teacher's strength is less than 1 lakh)

(iii) One award for each UT ($9 \times 1 = 9$)

(iv) Two awards each for KVS & NVS ($2 \times 2 = 4$)

(v) Three awards for CBSE (3)

(vi) One award for CISCE (1)

(vii) One award for CTSA (1)

(viii) One award for Sainik School and Schools under MoD (1)

(ix) One award for schools under AEES (1)

e. The shortlisted teachers before the final selection for the ICT Awards are required to make presentations before a committee. The composition of the committee is as follows:

a) Director, NCERT-Chairman

b) DDG, NIC- Member

c) A representative from Secondary Education Bureau, Dept of SE&L, MHRD-Member

d) A representative from Dept of IT-Member

e) Joint Director, CIET-Member Secretary

The Committee further recommends the requisite number of awardees to the Ministry with justification. At the Ministry level, the proposal has been scrutinized before the approval of the Minister.

2. General Education Quality Analysis Framework (GEQAF)-UNESCO: it involves

a. e-Resources shared by UNESCO in the field of Science education and classroom productivity.

b. Piloting of GEQAF, research tools and future plans, international forum on ICT, national consultation workshop etc. in India by UNESCO.

3. International ICT Conference: The ICT international conferences envision on:

(i) Digital infrastructure,

(ii) Governance and services on demand, and

(iii) Digital empowerment of citizens.

4. All India Children's Educational Audio-Video Festival (AICEAVF) and ICT Mela: All AICEAVF is one of the major children's educational audio-video programme festivals of India organised by CIE, NCERT, Delhi. This event is being organized to promote creative expression amongst educational media professionals, teacher educators, trainee teachers, teachers, and students. Originally, it was started by CIET and SIETs together and it has blossomed as India's major educational programme festival. As the best audio, video, new media, and ICT products are showcased, discussed, recognized, appreciated, and awarded, such events contribute in the longer run towards enhancing quality learning of the children. In the festival the awards are given to the winners of AICEAVF and ICT Mela in joint collaboration with SIETs in the following criteria:

a. Audio-Video Programme awards for producers/directors and others from Government Organizations (CIET/SIETs/EMMRCs/CEC/Others) of Pre-Primary, Primary, Upper Primary, Secondary and Sr. Secondary school system.

b. Audio-Video Programme awards for producers/directors and others from Independent Film Maker/Institution other than Govt. for Pre-Primary, Primary and Upper Primary school system.

c. Audio-Video Programme awards for Children (upto the age of 18 years) as Best Script (Audio), Best Editing (Audio), Best Voice Over (Audio), Best Sound Recording Studio (Audio) and Best Child Artist (Audio).

d. New Media/ICT Programme awards for Teachers/Teacher Educators/Trainees (Pre-Primary, Primary, Upper Primary, Secondary and Sr. Secondary school system).

e. Best Animation/Graphic awards for New Media/ICT personnel.

f. Individual excellence awards for Best script, Editing, Best Voice Over, Best camerawork, Best set designing, Sound recording, Animation/Graphics, Best Direction, etc.

g. Jury appreciation awards for the programmes/individual excellence is at the discretion of the Jury.

All Audio-Video and ICT/new media awards based on self-creative, innovative and expressive content rather than copying or modelling any types or stereotypes (such as racial, religious, ethnic or gender stereotypes) available in the creative industry or networks. For instance, a photograph/animation/video/music which use multimedia interactive signs or sounds to stimulate students' or teachers' sense of perception can be considered as new media/ICT text. The use of any medium to prepare their audio-video text includes app-based programme, photography, video game, video, sound or sonic text, installation, animation, graphic or mobile-based programmes, etc.

5. Summer Camp: The CIET proposes to organize a Summer Camp for the children every year on different themes like Digital Learning and Multimedia. The camp is free (no fees to be paid) and opens for students of class VI to X. The number of seats is limited and hence selection will be made on first come first basis. The focus of the camp is to introduce children to various ICT skills through fun-filled activities. The major objective of the summer camp is to inculcate the basic ICT skills for creating digital resources. The camp provides them with the exposure towards the audio, video and multimedia production activities and an ability to negotiate a range of devices, tools, mobile applications, software,

information and resources, integrate the various skills like reading, writing and listening along with the planned activities so that participants can create their own products through technology. Each participant also gets adequate hands-on experiences in puppetry, scriptwriting & storyboarding video/audio production, digital art/photography/augment reality/digitisation, world of emotions, ethical use of ICT, visual & performing arts, fun with Science & Social Science Instructions. For an example, in the year 2019 from 3rd June 2019 to 14th June 2019 at Chacha Nehru Bhawan, NCERT, Sri Aurobindo Marg, New Delhi, the CIET include the field trip to nearby place along with the fun-filled activities in the field of science, visual & performing arts, science and social sciences. The exposure, along with other activities intended to prepare them as global citizens in the future with adequate life skills.

The summer camp has the following objectives:

1. To develop digital literacy skills that will enable them to function as discerning students in an increasingly digital society.
2. To create digital resources like video, audio and animations & interact with ICT devices confidently.
3. To discover augment reality through 360-degree photography.
4. To expose them towards the methods of expression like creating storyboards, films, animations etc.
5. To acquire the skills in visual and performing arts.
6. To practice safe, legal, and ethical means of using ICT.
7. To instil the lifelong values of teamwork in a healthy environment.
8. To approach and experience each activity as exciting learning.
9. To inculcate scientific temper through fun activities.

6. Use of Webinar: For the enrichment and professional development of students, teachers, teacher educators and researchers, the webinar intends to cover various themes related to Educational Technology (ET) and ICT in education. The webinar will encompass topics related to creation and dissemination of e-contents, Content-Pedagogy-Technology integration, use of ICT in teaching-learning and assessment, OER, use of various ICT tools, creation of AR/VR contents, mobile app and AI based platforms etc. Being a premier institution working in the field of ET and ICT for school education and teacher education, CIET invites the learners to join in the Webinar, which will be held daily. This series of interactive sessions, hopefully, is a steppingstone in the enhancement of knowledge and skill of those working in the field of education. The live webinar is conducted in English and telecasted daily from 3.30 to 4.30 pm on 'NCERT official' You Tube channel through:

1. SWAYAM Prabha DT TV Kishor Manch channel #31
2. DD FreeDish #128
3. DishTV #2370
4. Tatasky #756
5. Airtel #440
6. Videocon #477
7. Sundirect #793 and
8. Jio TV Mobile app

7. Counseling Services for School Students: The CIET provides counseling to the students as required. NCERT announces 'Counselling Services for School Students' through its trained counselors. Students wishing to seek guidance can get in touch with counselors on WhatsApp, mobile number and email address provided in region-wise lists on the website of CIET- NCERT. The counseling services are provided free of charge in Northern, Southern, Eastern, Western, Delhi and North-Eastern regions of India.

State Institute of Educational Technology (SIET)

The CIET- NCERT is working with Maharashtra (Pune), Odisha, Andhra Pradesh (Hyderabad), Uttar Pradesh (Lucknow), Gujarat and Kerala (Thiruvananthapuram), SIETs with local stations to facilitate the teachers and students at ground level.

Right To Information Act (RTI)

The CIET- NCERT has a separate wing dealing with RTI and it comes under the supervision of the heads of various wings namely Academic, Production, Technical, Administration, ICT, Training Division, Media Production Division, Planning and Research Division and Engineering Division.

CONCLUSION

The CIET- NCERT promotes the use of mass media technology, expands, and improves the quality of education at the school level. It is involved in various activities such as design, development and dissemination of alternative learning systems, promotion of Educational Technology, training of personnel in Educational Technology, coordination of activities of its subsidiaries like the SIETs and consultancy and media support to other constituents of NCERT. The Institute is housed in a spacious building with open courtyards, Amphitheatre, two television studios, two sound studios, technical control rooms, workshop, seminar rooms, rehearsal areas and projection facilities, library, canteen, administrative areas and artists' studios. The Institute also provides courses in education at bachelor's, masters and doctoral levels.

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