UNIT 15 : RESOURCE CENTRE FOR EDUCATIONAL TECHNOLOGY

UNIT STRUCTURE

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15.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Discuss the resource Centre for educational technology - CIET, UGC, IGNOU, NOS, State ET Cells, AVRC, EMRC, NIST
- Explain their activity for the improvement of teaching-learning.

15.2 INTRODUCTION

Education Technology has the potential to provide equal opportunities in several ways. Access to educational technology at school can give students from low income homes, where there is little or no access to technology, "a needed edge to compete with children from more affluent homes where technology is common place in other words we can say that guaranteeing access for all classrooms to affordable educational technology in order to achieve curricular goals makes it possible to begin to address the inequities that exist among schools. Grabe and grabe note that technology in the form of telecommunications allow access to people access to interactive services through online discussion groups, interactive conference and interactive tutorials and access to files through online databases, library holdings texts and graphic files on the internet.

15.3 CIET (CENTRAL INSTITUTE OF EDUCATIONAL TECHNOLOGY)

Central Institute of Educational Technology, a constituent unit of NCERT, came into existence in the year 1984 with the merger of Centre for Educational Technology and Department of Teaching Aids. It was set up in NCERT to purchase equipment for State Institutes of Educational Technology. It is an institution under the NCERT which is located at New Delhi. It is a premier Institute of Educational Technology at the national level. Its major aim is to promote utilization of educational technologies viz., radio, TV, satellite communications and cyber media either separately or in combinations and its appropriate use to enhance learning and improve productivity in classrooms and schools. It is mainly concerned with the development of innovations and with using various media in school education. The Institute undertakes various activities to widen educational opportunities, promote equity and improve quality of educational processes at the school level. It comprises several units such as Programmed Learning, Educational Television, Innovations, Production and Evaluation.

It has organized the training of teachers for the Satellite Instructional Television Experiment in different states.

The institute is concerned with education at all levels and in all its aspects. It aims at bringing about improvement of education through various kinds of educational technologies. It has to deal with Pre-primary, Primary, Secondary, University Education, Open University education, Containing Education, Adult Education and so on.

- **Vision:** Vision of the institute is to be the national pioneer and leader in various aspects of the professional improvement and advancement in educational communication and technology, grounded in theory, in research, in practice and in code of ethics, providing solutions by utilizing the innovations, research combined with design, building and managing the resource centre of quality educational media software and integration of technology and pedagogy.
- **Mission:** The mission of Central Institute of Educational Technology (CIET) is to -
- Act as a nodal resource centre for school education media software acquired through national, regional and international sources for reference and research.
- Achieve excellence in design, research and production of educational software for children and teachers, including parents.
- Contribute to teacher education through the convergence of appropriate technologies.
- Build capacities of teachers/educators for quality improvement roles in school education.
- Constructively inform educational policy makers and to critically appraise educational technology (ICT related) policy in India.

15.4 ACTIVITIES OF THE CIET FOR THE IMPROVEMENT OF TEACHING LEARNING

Functions of the CIET

The major functions of the CIET are as follows -

- Designing alternative learning systems to deal with problems of education.
- Orientation of educational planners' administrators to the concept of educational technology.
- Training in specialized areas, radio, audio, television and video production and low-cost teaching aids.
- Production of audio- visual educational materials and other low-cost aids.
- Research and evaluation to test and improve systems, methods and materials.
- Extension services for supplying and screening of educational films, videotapes and audiotapes to Dooradarsan.
- Consultancy of educational technology and distance education programmes.
- Working as coordinating agency with the Ministry of Human Resource Development, State and International Organizations and UN agencies.

Major activities:

CIET has planned the T.V. Curriculum, training script-writers, producers, researchers and technical staff, production of educational programmes and research. So, CIET has been playing a pivotal role in implementing various innovative projects in educational technology both at National and State levels. The major activities are -

- Design, develop and disseminate alternative learning systems
- Promote Educational Technology
- Train Personnel in Educational Technology
- Advise and Co-ordinate activities of SIETs
- Provide Consultancy and media support to other constituents of NCERT

Role of the Institute:

The broad areas of activities of CIET are listed below -

- To design and produce media software especially mass media viz., educational radio and television; interactive multimedia and web based learning resources utilizing ICT to enrich the transactions of curricular activities at different levels of school education.
- To optimize the utilization of EDUSAT communication technologies and terrestrial transmission on national channels: Doordarshan, Gyan Darshan and Gyan Vani.
- To explore and infuse the appropriate and critical use of interactive digital content, web based communication and participatory networks.
- To undertake research and evaluation studies for assessment of need, preparation of audience profiles; undertaking monitoring and evaluation of systems programmes and materials to improve their effectiveness; to study their impact on learning processes, development of children and teachers and efficiencies of systems.
- Documentation of educational media programmes and research for enhancing utilization.
- Dissemination of media programmes through broadcast and non-broadcast modes through the distribution of ACDs, VCDs, DVDs, multimedia CDs and the web.
- Organize capacity building programmes for teachers and teacher-educators in concepts and applications of techniques and technologies for improving classroom instructions and their management processes and State Institute of Educational Technology (SIET) personnel in scripting, production of media programmes, communication and media researches and technical operations.
- To advise and coordinate (a) academic and technical programmes of the five State Institutes of Educational Technology (SIETs) (b) implementation of the National Policy of ICT for School Education, ICT@Schools Scheme.
- To provide consultancy to various organizations and individuals in the development, utilization and evaluation of educational

technologies.

The Focus Areas of the Institute

Develop e-content, disseminate e-contents through various modes (transmission, non-transmission through NROER and sales mechanism) and integrate ICTs in teaching learning process through capacity building among teachers through blended mode.

Regular Programmes/Activities being Organised

- Development of e-contents (audio, video, multimedia, etc.)
- Training and retraining of teachers and teacher educators in Educational Technology and new ICT.
- Disseminate e-contents through telecast/broadcast on DD -1, Gyan Vani, Gyan Darshan channels and sales mechanism.
- Third Party Evaluation of ICT Scheme in schools of Karnataka state and UT Chandigarh.

Significant Activities/Works Carried out in the Recent Past

- Developed ICT curriculum for students and teachers
- Developed National Repository of Open Educational Resources (NROER)
- Organized training programmes for teachers and teacher educators of 15 States/UTs through face to face and distance mode.
- Organized All India Children's Educational Audio Video Programmes, Contests and National ICT Award for school teachers

Collaboration with International/National Organisations/Agencies, etc.

- IGNOU and Doordarshan for telecast and broadcast of Audio/Video programmes.
- HBCSE-TIFR Mumbai for creation of NROER.
- SIETs, Viyan Prasar, CCRT, IGNCA, SCERTs for sharing of e-contents on NROER.
- CEMCA for development of QAMLM and promote FOSS environment.
- NIC for hoisting of Websites: ncert.nic.in, ciet.nic.in, nroer.gov.in, itschools.gov.in

15.5 UGC (UNIVERSITY GRANTS COMMISSION)

The UGC was first formed in 1945 to oversee the work of the three Central Universities of Aligarh, Banaras and Delhi. Its responsibility was extended in 1947 to cover all Indian universities. In August 1949 a recommendation was made to reconstitute the UGC along similar lines to the University Grants Committee of the United Kingdom. This recommendation was made by the University Education Commission (1948-1949) which was set up under the chairmanship of S. Radhakrishnan "to report on Indian university education and suggest improvements and extensions".

In 1952 the government decided that all grants to universities and higher learning institutions should be handled by the UGC. Subsequently, an inauguration was held on 28 December 1953 by Maulana Abul Kalam Azad, the Minister of Education, Natural Resources and Scientific Research. The motto of UGC is "Gyan-Vigyan Vimutaye".

In November 1956, the UGC became a statutory body upon the passing of the "University Grants Commission Act, 1956" by the Indian Parliament. In 1994 and 1995 the UGC decentralized its operations by setting up six regional centers at Pune, Hyderabad, Kolkata, Bhopal, Guwahati and Bangalore. The head office of the UGC is located at Bahadur Shah Zafar Marg in New Delhi, with two additional bureaus operating from 35, Feroze Shah Road and the South Campus of University of Delhi as well. As of today the offices can be located in all the major cities including Kolkata, New Delhi and Bangalore. Post-independence the government of India thought that education must be given the maximum importance from the elementary education to the highest levels of education such as the PhD degree. It was set up by the Union Government of India to ensure that the standard of the University education in India is maintained. Professor Ved Prakash was heading this institute when it started and he was a great academician. When talking of UGC, it is the apex body that approves universities in the country. UGC provide funds for affiliated universities and colleges. The UGC also conducts exams, known as NET, for appointing

teachers in colleges.

The University Grants Commission (UGC) came into existence on 28th December, 1953 and became a statutory Organization of the Government of India by an Act of Parliament in 1956, for the coordination, determination and maintenance of standards of teaching, examination and research in university education. UGC has taken steps to implement the recommendations of New Policy on Education such as establishment of Autonomous Colleges, Centers of Advanced Studies in Universities, resurrecting of courses, regular use of media for higher education, establishment of Education Media Research Centers and Audio Visual Research Centers for the use of media and setting up of Academic Staff Colleges for training and orientation of college teachers.

All of India's higher education is managed by the University Grants Commission (UGC) and the various councils. The UGC, set up under UGC Act 1956, has been empowered to promote and coordinate university education in India and also approve grants to them. The UGC is responsible for coordination, determination, and maintenance of standards and release of grants to universities and research organizations. Various professional councils are responsible for recognition of courses, promotion of professional institutions and provision of grants to undergraduate programmes. Though there is no statutory council for software development, NASSCOM is generally accepted as equivalent. A number of Research Councils have also been setup under the aegis of Central Government.

Central Government has the responsibility of coordinating and determining standards in higher education. This responsibility is discharged through UGC which was established in 1956 under an Act of Parliament to take measures for promotion and co-ordination of university education and determination and maintenance of standards in teachings, examinations and research in universities.

The Commission can enquire into the financial needs of the universities; allocate and disburse grants to them; establish and maintain common services and facilities; recommend measures for improvement

of university education and give advice on allocation of grants and establishment of new universities.

The UGC has the unique distinction of being the only grant-giving agency in the country which has been vested with two responsibilities: that of providing funds and that of coordination, determination and maintenance of standards in institutions of higher education. The UGC`s mandate includes-

- Promoting and coordinating university education.
- Determining and maintaining standards of teaching, examination and research in universities.
- Framing regulations on minimum standards of education.
- Monitoring developments in the field of collegiate and university education; disbursing grants to the universities and colleges.
- Serving as a vital link between the Union and state governments and institutions of higher learning.
- Advising the Central and State governments on the measures necessary for improvement of university education.

15.6 ACTIVITIES OF THE UGC FOR THE IMPROVEMENT OF TEACHING-LEARNING

The UGC controls the following in India -

- Maintaining the standard of research, teaching and examination in the universities.
- Promoting university education.
- Making regulations to maintain the minimum standard of education in the country.
- It is a link between the union government and the institutes of higher education.
- It also advises the government about the steps to be taken in order to improve the education system.

UGC plays a vital role in the education of the country. It has ensured that a system it followed in higher education. UGC also ensures that

the education in all these top universities is of the same standard so that the students passing out of these colleges can be considered equal.

15.7 IGNOU (INDIRA GANDHI NATIONAL OPEN UNIVERSITY)

IGNOU was established in September 1985 with the aim of widening access of higher education to larger segments of the population, organizing programmes of continuing education and initiating special programmes of higher education for specific target groups like women, people living in backward areas, etc. IGNOU introduced its programmes in 1987.

Other steps taken in higher education are: establishment of 10 central universities, establishment of Indira Gandhi National Open University (IGNOU) and assistance to other institutions of higher learning's like Indian Council of Social Science Research etc.

It established by an Act of Parliament in 1985, has continuously striven to build an inclusive knowledge society through inclusive education. It has tried to increase the Gross Enrollment Ratio (GER) by offering high-quality teaching through the Open and Distance Learning (ODL) mode.

The University began by offering two academic programmes in 1987, i.e., Diploma in Management and Diploma in Distance Education, with strength of 4,528 students. Today, it serves the educational aspirations of over 3 million students in India and other countries through 21 Schools of Studies and a network of 67 regional centers.

The mandate of the University is to -

- Provide access to higher education to all segments of the society;
- Offer high-quality, innovative and need-based programmes at different levels, to all those who require them;
- Reach out to the disadvantaged by offering programmes in all parts of the country at affordable costs.
- Promote, coordinate and regulate the standards of education offered through open and distance learning in the country.
- To achieve the twin objectives of widening access for all sections of

society and providing continual professional development and training to all sectors of the economy, the University uses a variety of media and latest technology in imparting education.

- **Vision:** IGNOU, the National Resource Centre for Open and Distance Learning (ODL), with international recognition and presence, shall provide seamless access to sustainable and learner-centric quality education, skill up gradation and training to all by using innovative technologies and methodologies and ensuring convergence of existing systems for massive human resource required for promoting integrated national development and global understanding.

"The Indira Gandhi National Open University, the National Resource Centre for Open and Distance Learning, with international recognition and presence, shall provide seamless access to sustainable and learner-centric quality education, skill up gradation and training to all by using innovative technologies and methodologies and ensuring convergence of existing systems for large-scale human resource development, required for promoting integrated national development and global understanding".

- **Mission:** To advance frontiers of knowledge and promote its dissemination through sustainable Open and Distance Learning systems, seamlessly accessible to all, including those hitherto unreached, from among whom the leaders and innovators of tomorrow will emerge, the University shall -
- Strengthen the development of the National Resource Centre as a proactive role model for high-quality and learner-centric Open and Distance Learning system;
- Share professional capabilities and resources to improve standards of distance education in the country;
- Periodically assess and accredit institutions of Open and Distance Learning to promote centers of excellence in the country;
- Develop networks, using emerging technologies and methods, with global reach for effective programme delivery;

- Provide an intelligent and flexible system of education to meet the challenges of access and equity, and work towards development of a knowledge society;
- Forge convergence of all systems and work for seamless education across national boundaries to develop global collaboration and partnership;
- Take education to the hitherto unreached and promote community participation for local development through life-coping skills;
- Provide specific need-based education and training opportunities for continuous professional development and skill upgradation to in-service professionals; and
- Strive towards continuous development of methods and strategies for research and development for generation of knowledge in frontier areas, including Open and Distance Learning.

15.8 ACTIVITIES OF THE IGNOU FOR THE IMPROVEMENT OF TEACHING-LEARNING

The activities of IGNOU are -

- The University has made a significant mark in the areas of higher education, community education and continual professional development.
- The University has been networking with reputed public institutions and private enterprises for enhancing the educational opportunities being offered by it.
- As a world leader in distance education, it has been conferred with awards of excellence by the Commonwealth of Learning (COL), Canada, several times.
- The University is committed to quality in teaching, research, training and extension activities, and acts as a national resource centre for expertise and infrastructure in the ODL system.
- The University has established the Centre for Extension Education, National Centre for Disability Studies and National Centre for

Innovation in Distance Education, to focus on specific learner groups and enrich the distance learning system.

- Emphasis is now being laid on developing interactive multimedia and online learning, and adding value to the traditional distance education delivery mode with modern technology-enabled education within the framework of blended learning.
- Free of cost education is being provided to all jail inmates across the country.
- A large number of SC/ST students have been admitted to various programmes of the University.

Over the years, IGNOU has lived up to the country's expectations of providing education to the marginalized sections of society.

15.9 NOS (NATIONAL OPEN SCHOOL)

In 1979, the Open School was set up as a project of the Central Board of Secondary Education, Delhi. The Open School was not an examining body at that time and its examinations were conducted by the CBSE. In November 1989, the Open School was upgraded and became the National Open School (NOS), an autonomous institution. The NOS was empowered to conduct its own examinations and it became an independent Board.

- **Vision:** Sustainable inclusive learning with universal and flexible access to quality school education and skill development.
- **Mission:**
- Providing relevant, continuity and holistic education up to pre-degree level through Open and Distance Learning System.
- Contributing to the Universalization of school education.
- Catering to the educational needs of the prioritized target groups for equity and social justice.

15.10 ACTIVITIES OF THE NOS FOR THE IMPROVEMENT OF TEACHING-LEARNING

Strategies of NOS

The mission of NOS is to provide relevant, continuing and developmental education to prioritized client groups in response to the assessed needs of the people, through an Open Learning System, at the school stage.

These are an alternative to the formal system and thus make its contributions to -

- Universalization of education;
- Greater equity and justice in society; and
- The evolution of a learning society.

Keeping in view the above objectives an endeavor was made to make the courses in consonance with the needs of potential target groups. The NOS had designed, developed and delivered high quality academic programmes as well as courses in professional areas like Computer Applications, Word Processing and Secretarial Practice.

It offers two types of courses: general educational courses and vocational/life enrichment courses. Open Vocational Education is offered at secondary and senior secondary levels. Life Enrichment and Continuing Education Courses are addressed to general public and those in various areas of work.

The general education courses offered by the NOS include -

- Foundation Course equivalent to grade VIII serving as a bridge course for joining the Secondary level programme;
- Secondary School Course equivalent to class X level;
- Senior Secondary Education Course equivalent to class XII level.

In order to further widen its access, the NOS has launched the following programmes -

- Open Basic Education programme aimed at providing continuing education to the neo-literates in the age group 14+;
- Open Elementary Education for the benefit of the non-school going

children in the school going group;

- Rural Community Workshops are being set up for providing vocational education and training in rural areas. Under this Rural Community Workshops scheme financial support will be provided to NGOs to set up workshops for vocational courses in rural areas;
- Open Vocational Education Programme which can be combined with academics, skill-based Certificate Courses of short and long-term duration, Special Professional Certificate/Diploma Courses, Stand-alone vocational subjects, Life Enrichment Courses with vocational approaches etc.;
- Emerging areas, namely, Early Childhood Care and Education, Ophthalmology, Geriatrics, Pre-coaching for SC/ST etc.

NOS is providing a number of Vocational, Life Enrichment and community oriented courses besides General and Academic Courses at Secondary and Senior Secondary level.

It also offers Elementary level Courses through its Open Basic Education Programmes (OBE). Government of India through a gazette notification vested NOS with the authority to examine and certify learners registered with it up to pre degree level courses whether Academic, Technical or Vocational.

NOS are committed to provide Excellent, Sustainable, Inclusive and Flexible Education up to Pre-degree level through Open and Distance Learning (ODL) mode and Compliance of requirements to ensure satisfaction of learners and continual improvement of our Quality Management System.

15.11 STATE ET CELLS (STATE EDUCATIONAL TECHNOLOGY CELLS)

In 1970, the Ministry of Education took up a scheme of ET. Under this scheme, an ET unit in the Ministry, a Centre for Educational Technology (CET) under NCERT, and ET cells in six SITE states were set up in 1974. (There was a lot of time lag in thought and deed.)

Educational Technology Cell was established in 2003. This cell was primarily conceived to produce high quality Video/Web/Multimedia based instructional material; syllabus based content development for the National Programme on Technology Enhanced Learning (NPTEL) project. Over the period of time, its role has been expanded to absorb new paradigms of e-learning, training of faculty to develop their own e-content and to use e-contents developed by NPTEL, training of faculty from other institutes to facilitate streaming of video and web based lectures in their respective institutes, streaming of video lectures round the clock on demand, at IIT Roorkee, creation of question banks and quality control of e-content generation through feedback mechanism. The cell has state-of-the-art digital video cameras, non-linear editing systems, audio and video systems, teaching aids, substantial number of computers, servers and soft wares required to produce high quality Web based and Video based courses and 3D-animation. This Centre is also connected to satellite through EDUSAT (a facility provided by ISRO).

The Institute has a well-equipped Educational Technology cell (E T Cell) to lend relevant technological support to the ongoing instructional activities as well as the in-service education programmes. It has a rich library of educational films, film-strips, video recording and audio cassettes besides the requisite hardware. There is TV viewing room to watch telecasts / video playbacks of educational programmes. Educational Technology is a course component of the pre-service teacher education programmes of the Institute.

The ET Cell has a modern audio studio with a spacious recording room and other production facilities. The studio is required with 3 console tape recorders, an 8 channel mixer unit and a mobile tape recorder for outdoor recording. The functions of the audio studio are -

- To provide audio resource support to the pre and in-service training programmes of the college.
- To train educational functionaries in educational technology with a view to developing technical manpower, and

- To develop prototype audio educational software for wider dissemination in school and training establishments.

The E T Cell has developed more than 400 audio programmes in the areas of language teaching value education, child psychology, astronomy, guidance and counseling, etc., for use by students, teacher and teacher trainers. The Cell undertakes collaborative projects with the states in the region for curriculum based audio cassettes which are subsequently distributed to the beneficiaries by the states.

15.12 ACTIVITIES OF THE STATE ET CELLS FOR THE IMPROVEMENT OF TEACHING - LEARNING

At the state level we have Educational Technology (ET) Cells located and functioning either under the supervision and administrative control of the SCERTs/SIES of respective states/union territories or established to function independently in the name of State Institute of Educational Technology (SIETs). SIET represents the type of institutions (functioning at present in seven states) supposed to carry out the similar functions as performed by CIET at the center.

The States ET Cells are usually expected to discharge the functions like -

- Produce educational video and audio programmes,
- Design, develop and disseminate teaching-learning material,
- Conduct training and orientation programmes, etc.

15.13 AVRC (AUDIO VISUAL RESEARCH CENTRE)

In 1984 University Grants Commission (UGC), New Delhi has launched Country Wide Class Room (CWCR) and production facilities at 6 Universities in India through establishing media centers in the name of Audio Visual Research Centers (AVRCs). Later these centers have been renamed as Educational Multimedia Research Centers.

The Audio-Visual Resource centre for the School for Studies in Art and Culture (SSAC) in the faculty of Arts and Social Sciences (FASS) at

Carleton University (CU) in Ottawa, Ontario, Canada. The AVRC serves the combined faculties of Art, History, Music and Film at CU.

This was mainly to use electronic media for the quality enrichment of higher education. In 1996- 97, the centre produced 16 educational programmes covering various aspects like earth science, ecology, maths, chemistry, social science, etc. The centre also undertakes research in all aspects of educational technology in relation to learning for both urban and rural college.

Objectives:

The audio-visual resource centre has the following objectives -

- To map the audience profile in terms of demographic, socioeconomic and educational background along with their media habitats.
- To examine whether it helps the teachers in higher education by enabling them to teach more effectively.

15.14 ACTIVITIES OF THE AVRC FOR THE IMPROVEMENT OF TEACHING - LEARNING

The audio-visual resource centre has the following activities -

- Circulation of reserve material for courses at the second-year level and above students may consult these materials on two-hour loan arrangement.
- Online searching of the school's teaching and reference collections, including a digital image collection. Requests for items or patron accounts may be made in person or via email avrc @carleton.ca.
- Assistance in locating analogue or digital material or in creating presentations or rescreening a film-we're here to help.

15.15 EMRC (EDUCATIONAL MULTIMEDIA RESEARCH CENTRE)

Educational Multimedia Research Centre (EMRC) was established as audio visual research centre in 1989 by the UGC at Panjab University,

Patiyala under the country wide class room project. The centre is presently funded by the UGC and MHRD for producing enrichment educational video lecture and e-content programmes. The centre is equipped with a large state of the art studio with chroma facility latest technology broadcasting equipment and high powered multimedia workstation to produce educational video content.

Mission:

To generate, disseminate and preserve knowledge and also prepare the next generation of thinking media professionals by providing diverse learning environments.

15.16 ACTIVITIES OF THE EMRC FOR THE IMPROVEMENT OF TEACHING - LEARNING

The activities of EMRC are -

- Production of educational programmes and related support material and setting up of appropriate facilities for this.
- Research related to optimizing the effectiveness of the programmes.
- Providing a forum or the active involvement of academic and other scholars in the creation of appropriate educational programme.
- Studying promoting and experimenting with new techniques/ technology that will increase the research and effectiveness of educational communication.



CHECK YOUR PROGRESS

Q 1: Write the full form of CIET.

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Q 2: In which year UGC was establised?

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Q 3: Mention one activity of IGNOU?

.....

Q 4: What is the vision of NOS?

.....

Q 5: What is State ET Cell?

.....

Q 6: Write one objective of AVRC?

.....

Q 7: What is the full form of EMRC?

.....

Q 8: From where NIST received grants?

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15.17 NIST (NATIONAL INSTITUTE OF SCIENCE AND TECHNOLOGY)

The National Institute of Science and Technology (NIST) was established in 1996 and is being managed by the SM Charitable Educational Trust under the vision and guidance of its renowned philanthropist and educationist Chairman, Sri Surendra Mudali. The Institute is approved by the All India Council for Technical Education (AICTE under MHRD, Govt of India) and is affiliated to the Biju Patnaik University of Technology (BPUT). The Institute campus of 60 acres is located at the picturesque Palur Hills about 12 km from Berhampur and 3 hours drive from Bhubaneswar.

The Institute has grown by leaps and bounds under the table leadership of its founder Director, Prof. Sangram Mudali, Director (M.S., University of Houston, B. Tech., IIT Kanpur), Prof. (Mrs.) Geetika Mudali, Placement Director, M.S.(MIS), New Jersey Institute of Technology, NJ) and Prof. Ajit Kumar Panda, Principal, (Boyscast Scholar at University of Michigan, USA). Within a short span of 17 years, it has produced 4 BOYSCAST faculty scholars who have been funded by Government of India to pursue postgraduate research in the top Institutes in USA and Germany. NIST has produced 3 Full Bright Scholars. Three of its faculty has won the Samant Chandrasekhar Young Scientist Award given by the Government of Orissa. Two AICTE funded Emeritus Professors worked at NIST. The

faculty of the Institute has been awarded 3 URSI Young Scientist Awards. More than 25 Post doctorate scholarships have been awarded to the Institute faculty. The faculties of the Institute are alumni of IIT's, IISc, ISI, Jadavpur University and Calcutta University etc. More than 35 faculty of the Institute are from the IITs alone which is a testimony to its ability to attract and retain top-notch faculty. The faculties of the Institute have published more than 250 journal papers in refereed journals and are authors of about 24 books published by reputed publishing houses. The Institute also has its own publishing house "NIST Press". The Institute has received a number of grants, projects, special funding, travel funding, SDPs, FIST grant, scholarships, etc., from the DST, CSIR, AICTE, IT companies, etc.

- NIST has been ranked #28 in India by DataQuest - CMRSurvey Report 2013-2014.
- NAAC has Accredited NIST with Grade A with a high score of 3.22
- 69th All-India Rank by NIRF, MHRD, Govt. of India, 2016
- NIST has been ranked #2 in eastern India and #13 in India by DataQuest - 2016.
- 66th All India Rank by OUTLOOK 2016.
- BPUT (Affiliating University) Students have ranked NIST as No.1 Engineering Institute among 100+ engineering institutes of Odisha through public voting.
- NIST has bagged with the prestigious eINDIA 2013 Award at an event held in Hyderabad on July, 23 under the category of "Best Teaching Learning Institute".
- NIST has once again proved its credentials in bagging the "Best Technical Institute in R and D Activities" in the State of Odisha. The Award was received by NIST at a glittering ceremony in Jaydev Bhavan, Bhubaneswar on the eve of Engineers' Day-2013.

NIST is a considered as a benchmark research institution in eastern India. The Institute has recently signed MoU for research collaboration in the field of nano sciences, communications, semiconductor technology with the National Taiwan University and University of Electro

Communications, Japan. NIST has signed MoU with industries like Sandhur and Sun Moksha for collaborative work in the area of nano technology and renewal energy. NIST, in association with IIT, Khargapur, is also part of the MHRD Virtual Laboratory project.

Over the past 22 years, NIST has raised manifold. Today, NIST has been ranked 69th in the entire country in engineering based National Institutional Ranking Framework (NIRF), MHRD, Government of India and it is the 2nd best engineering college in eastern India and 14th best in India by Data Quest survey 2017, 65th Best College in India by OUTLOOK, 2016 and has been ranked as No. 1 Private Engineering College in the state of Odisha by BPUT students. It has been accredited by NAAC as Grade A college with 3.22 CGPA which is highest in the state. Sprawling over 65 acres of lush green campus, the college is now home to 4000 students, 250 faculty members. NIST is a DSIR, Government of India, certified and recognized R and D center. NIST is the only TIFAC CORE Center of India funded by DST in 3G/4G communication technologies.

Since its inception the institute has grown manifolds, and today students from over 13 states are studying here. There are high standard labs with high-tech equipment. NPTEL course water is used to enhance the teaching and learning process. NPTEL is from the IITs/IISc and are used by all faculty and students. All in all, NIST is a highly advanced institution in keeping with the times.

The ultimate goal of any plan for educational technology should reflect two intentions, equitable access to technology for all students and educators and comparable levels of educational technology for all schools. In setting up on educational technology resources centre three aspects have to be addressed. Determination of the equipment required hardware and software, securing require founds so as to cover initial costs such as maintenance and technical assistance providing professional development for educators. So that technology is utilized and implemented meaningfully. Thus, technology can become the force that equalizes educational opportunities of all children regardless of

location and social and economical factors.

Mission

"To create an Educational Institute for nurturing Quality Engineers and Managers for growth of Indian Industries, to develop Entrepreneurs and to pursue Innovative Research on Emerging Technologies for the Future Generation."

Vision

"Create engineering minds capable of mastering the global challenges of tomorrow's technology".

15.18 ACTIVITIES OF THE NIST FOR THE IMPROVEMENT OF TEACHING - LEARNING

The activities of NIST are -

- **Technical Activities:** SANKALP is a national-level techno-management symposium organized by the National Institute of Science and Technology, Berhampur, with an aim to nurture the technical expertise and skills among youngsters. The two-day event provides a unique platform to showcase their talents fueling their innovations in all myriad forms so that they can defy the odds to achieve the pinnacle of fame and glory. Two days of extravaganza presents a plethora of events including Robotics, Web Designing, Quizzes, Coding, Paper Presentation and many more. This enthralling techno-fiesta gives a chance to students to explore and conquer the vast realm of new horizon, redefining the meaning of success itself.

Carrying the legacy forward 'Sankalp 2016' through various technical, management, and fun events tested the caliber of the enthusiastic participants from NIST and different colleges of the state. It included Invited Talks, Panel Discussions, RC Aircraft Modeling Workshop, Technical events and contests, and fun events like Star Nite and Cultural Evening. The Invited Talks included engaging talks by eminent personalities like Arvind Tiwary on the topic "opportunities for startup-

story of india's silicon valley"; Piyush Agarwal,CEO, dabbawalaassociation,Mumbai. A panel discussion was conducted on the topic "India's Demography:Dividend or Disaster" on the 1st day of the programme. Mr.Priya Ranjan Sahu, Former Chief Editor Hindustan Times, Mr.Sudhir Patnaik Editor.

This was the 13th version of the original theme since its inception in the year 2003. Since then, the voyage has been propelled with the true spirit of team work, cooperation, coordination and determination which was catalyzed by the motivation and inspiration of our esteemed Director, Prof. Sangram Mudali and Placement Director, Prof. (Mrs.) Geetika Mudali.

- **Cultural Activities:** The institute organizes its Annual Cultural Fest. Both students and faculty challenge and stretch their extracurricular talents to the extreme. The celebrations start with a series of games and sports events like Basketball, Volleyball, Football, Swimming, Lawn Tennis, Throw Ball and many more. The evening splash with the spirit of enjoyment as students as well as faculty members took to the stage showcasing their singing, dancing and acting talents. The second day dedicates to various stage events like Antakshari, Dumb Charades, Debate and Skits. The skits range from Modern Ramayana to Students' Life and several other interesting and nerve tickling experiences. During the fest the Gold and Silver medalists are also felicitate and the deserving students are offered scholarships by the respective sponsoring faculty and staff in the presence of Prof. Sangram Mudali and Prof. Geetika Mudali. The Fashion Show marked the end of the eventful evening.
  - 11th Anniversary Celebration of NIST e-new
  - 15 Glorious Years Celebration
  - Independence Day and Republic Day celebration
- **Co-curricular Activities**
  - Blood Donation camp
  - NISTians raft Mahanadi
  - Orientation day for 1st year students

- Orientation Program on Basics for Freshers
- A Mini-Trekking Expedition
- Industrial Tour of Management Students
- National Himalayan Trekking Expedition
- Parasailing

- **Club Activities**
  - Movie making competition
  - Summer robotics workshop
  - Eyebotics
  - Astronomy week
  - Sand art competition
  - Technical clubs
  - Cultural clubs
  - Health and sports clubs
  - Language clubs
- **Sports Activities**

  NIST students come out with flying colors in different sporting events.



ACTIVITY 15.1

- Write from your own words -
- How is technology going to help the students in the classroom?
- Does the technology encourage broader community participation?



15.19 LET US SUM UP

- Central Institute of Educational Technology, a constituent unit of NCERT, came into existence in the year 1984 with the merger of Centre for Educational Technology and Department of Teaching Aids. It aims at bringing about improvement of education through various kinds of educational technologies.
- Major activities of CIET are planning the T.V. Curriculum, training script-writers, producers, researchers and technical staff, production

of educational programmes and research. So CIET has been playing a pivotal role in implementing various innovative projects in educational technology both at National and State levels.

- The University Grants Commission (UGC) was set up in 1956 for coordination and determination of standards. UGC has taken steps to implement the recommendations of New Policy on Education such as establishment of Autonomous Colleges, Centers of Advanced Studies in Universities, resurrecting of courses, regular use of media for higher education, establishment of Education Media Research Centers and Audio Visual Research Centers for the use of media and setting up of Academic Staff Colleges for training and orientation of college teachers.
- The UGC controls the following in India - maintaining the standard of research, teaching and examination in the universities, promoting university education, making regulations to maintain the minimum standard of education in the country, it is a link between the union government and the institutes of higher education, it also advises the government about the steps to be taken in order to improve the education system.
- IGNOU was established in September 1985 with the aim of widening access of higher education to larger segments of the population, organizing programmes of continuing education and initiating special programmes of higher education for specific target groups like women, people living in backward areas, etc. IGNOU introduced its programmes in 1987.
- The activities of IGNOU are - the University has made a significant mark in the areas of higher education, community education and continual professional development, it has been networking with reputed public institutions and private enterprises for enhancing the educational opportunities being offered by it, as a world leader in distance education, it has been conferred with awards of excellence by the Commonwealth of Learning (COL), Canada, several times, it is committed to quality in teaching, research, training and extension

activities, and acts as a national resource centre for expertise and infrastructure in the ODL system, it has established the Centre for Extension Education, National Centre for Disability Studies and National Centre for Innovation in Distance Education, to focus on specific learner groups and enrich the distance learning system, emphasis is now being laid on developing interactive multimedia and online learning, and adding value to the traditional distance education delivery mode with modern technology-enabled education within the framework of blended learning, free of cost education is being provided to all jail inmates across the country, a large number of SC/ST students have been admitted to various programmes of the University.

- In 1979, the Open School was set up as a project of the Central Board of Secondary Education, Delhi. The Open School was not an examining body at that time and its examinations were conducted by the CBSE. In November 1989, the Open School was upgraded and became the National Open School (NOS), an autonomous institution. The NOS was empowered to conduct its own examinations and it became an independent Board.
- The mission of NOS is to provide relevant, continuing and developmental education to prioritized client groups in response to the assessed needs of the people, through an Open Learning System, at the school stage.
- Educational Technology Cell was established in 2003. This cell was primarily conceived to produce high quality Video/Web/Multimedia based instructional material; syllabus based content development for the National Programme on Technology Enhanced Learning (NPTEL) project.
- The States ET Cells are usually expected to discharge the functions like - produce educational video and audio programmes, design, develop and disseminate teaching-learning material, conduct training and orientation programmes, etc.

- In 1984 University Grants Commission (UGC), New Delhi has launched Country Wide Class Room (CWCR) and production facilities at 6 Universities in India through establishing media centers in the name of Audio Visual Research Centers (AVRCs). Later these centers have been renamed as Educational Multimedia Research Centers.
- The audio-visual resource centre has the activities like - circulation of reserve material for courses at the second-year level and above students may consult these materials on two-hour loan arrangement, online searching of the school's teaching and reference collections, including a digital image collection, requests for items or patron accounts may be made in person or via email avrc @carleton.ca., assistance in locating analogue or digital material or in creating presentations or rescreening a film-we're here to help.
- Educational Multimedia Research Centre (EMRC) was established as audio visual research centre in 1989 by the UGC at Panjab University, Patiyala under the country wide class room project. The centre is presently funded by the UGC and MHRD for producing enrichment educational video lecture and e-content programmes.
- The activities of EMRC are - production of educational programmes and related support material and setting up of appropriate facilities for this, research related to optimizing the effectiveness of the programmes, providing a forum or the active involvement of academic and other scholars in the creation of appropriate educational programme, studying promoting and experimenting with new techniques/technology that will increase the research and effectiveness of educational communication.
- The National Institute of Science and Technology (NIST) was established in 1996 and is being managed by the SM Charitable Educational Trust under the vision and guidance of its renowned philanthropist and educationist Chairman, Sri Surendra Mudali. The Institute is approved by the All India Council for Technical Education (AICTE under MHRD, Govt of India) and is affiliated to the Biju Patnaik

University of Technology (BPUT).

- The activities of NIST are - Technical Activities, Cultural Activities, Co-curricular Activities, Club Activities and Sports Activities.

15.20 FURTHER READING

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15.21 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Central Institute of Educational Technology.

Ans to Q No 2: 1956.

Ans to Q No 3: Promoting university education.

Ans to Q No 4: Sustainable inclusive learning with universal and flexible access to quality school education and skill development.

Ans to Q No 5: State ET Cell was primarily conceived to produce high quality Video/Web/Multimedia based instructional material; syllabus based content development for the National Programme on Technology Enhanced Learning (NPTEL) project.

Ans to Q No 6: To map the audience profile in terms of demographic, socioeconomic and educational background along with their media habitats.

Ans to Q No 7: Educational Multimedia Research Centre

Ans to Q No 8: NIST has received a number of grants from the DST, CSIR, AICTE, IT companies, etc.

15.22 MODEL QUESTIONS

Short Questions (Answer each question in around 150 words)

Q 1: What is the role of CIET?

Q 2: What is the vision of IGNOU?

Q 3: What are the activities of NIST?

Long Questions. (Answer each question in around 300-500 words)

Q 1: "The motto of UGC is Gyan-Vigyan Vimutaye"- discuss the statement.

Q 2: Write briefly about NOS.

Q 3: Discuss the role of State ET Cells.

Q 4: Discuss the activities of AVRC and EMRC.

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