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19. MEDIA AND EDUCATIONAL TECHNOLOGY

1. POLICY PERSPECTIVE

19.1.1 Acknowledging the potential of modern communication technology the NPE, 1986 and POA, 1986 had spelt out the actions that need to be taken in this important area. The Revised Policy Formulations have reiterated the provisions of NPE, 1986 relating to Media and Educational Technology. Hence what needs to be done is a restatement of the POA, 1986 taking into account the experience gained in its implementation and the developments in this area of rapid technological change.

2. ELECTRONIC MEDIA

Present Situation

(a) ***School Education***

19.2.1 In school education, the CentralTnnstitute of Educational Technology (CIET) and the six State Institutes of Educational Technology (SIET) in Uttar Pradesh, Bihar, Orissa, Gujarat, Maharashtra and Andhra Pradesh continue to define the production facility. Since April 1988, the responsibility for programme production of ETV transmission is being shouldered by CIET and SIETs. Another important development has been that the Government has decided to make these SIETs autonomous in order to make them more professional. SIETs in U.P., Maharashtra, Orissa and Andhra Pradesh have already been conferred autonomous status. However, the working of the SIETs and their output is still sub-optimal. There is a need to improve the quality of the programmes. Increasing their output has to remain a priority during the 8th Plan. The programmes continue to be of an "enrichment* type with the added feature that even the segments aimed at various groups of topics have not got defined. Topics get covered in a somewhat random manner. There would be advantage in defining beforehand the optimum coverage and the objectives to be achieved by transmission of even enrichment programmes and to schedule programme production accordingly. The involvement of non-government organisations(NGOs) has not come about in any substantial manner so far.

19.2.2 An important initiative has been the distribution of radio-cum-cassette players and colour TVs in primary schools under the Educational Technology Scheme. So far 37,129 schools have been provided with TV sets and 2,56,566 schools have been provided with radio-cum-cassette players. The scheme is being evaluated by the Ministry.

(b) ***Adult Education***

19.2.3 A good beginning has been made for utilizing Education Technology for adult literacy and continuing education. Short capsules for conveying the message of literacy appear regularly at prime time on the TV. In order to retain the interest of the neo-literates an innovative project called' Vivek Darpan' has been jointly launched by the Department of Electronics and Ministry of Human Resource Development. Under this programme 100 villages have been provided with a colour TV set and a VCR each (together called 'Sangha Mitra'). It is an experimental project and its experience would enable the Government to consider a larger coverage in the 8th Plan.

(c) ***Primary Education and Teacher Training***

19.2.4 Recognising the need to provide necessary background and orientation to primary and upper primary school teachers, inputs in Educational Technology have been made an integral part of in-service as well as pre-service training for teachers in the DIETs. A senior lecturer and lecturer in Educational Technology are part of the prescribed staffing norm for each DIET. These faculty members also serve as nodal points to liaise with the nearest AIR Kendra besides acting as trainers. They help them in production of educational broadcasts. Teacher Training Institutes like DIET, CTE and IASE have been provided with VCRs and colour TVs and efforts are now being made to make available adequate number of software for their optimal utilisation.

(d) ***Higher Education***

19.2.5 In higher education the IGNOU has been provided a half hour slot on the national TV network early in the morning. The Country-wide Class Room Programme of the UGC is continuing with a two hour transmission daily between 1-2 p.m. and 4-5 p.m. The UGC has created 15 Educational Media Research Centres (EMRCs) and Audio Visual Research Centres (AVRCs); through these centres the UGC has been able to achieve a level of 80% for indigenously produced programmes. However, in order to keep abreast with rapid developments in different areas of knowledge, programmes made abroad would have to be used optimally; a level of 15 to 20% seems reasonable. The UGC has also developed the framework for setting up an Inter University Consortium for Educational Communication (IUCEC) which will on the one hand provide coordination and leadership in EMRC-AVRC and on the other would develop as a forum to bring the Government, universities, NGOs and other professionals together. IUCEC would also oversee and organise efficient marketing of the educational cassettes. A notable initiative has been the preparation *tf a series

of cassettes for each subject at under-graduate level* which would make available the benefit of good quality leaching to students all-over the country.

(e) *Technical Education*

19.2.6 In technical education four Technical Teachers' Training Institutes (TTTIs) and some IITs have been provided with reasonable programmeproduction infrastructure. About 300 programmes have been produced and made available to Polytechnics and Engineering colleges for use through the VCRs and cinematographic equipment. Professional bodies like the Institute of Electronics and Telecommunications Engineers (IETEX have launched their own programmes of distance; education and production of video films.

19.2.7 POA had envisaged establishment of radio stations in universities/colleges during the 7th Plan. Provision of a dedicated educational TV channel by 1991 -92 and cc.nmissioning of dedicated satellite system for education have made no progress in this period. It is doubtful whether radio stations can be set up in the university/college immediately. Such transmissions may be possible in future with technological developments. Dedicated satellite system may not be required to sustain such a channel. There is a need for a dedicated educational TV channel and a sufficiently large fixed time segment for radio transmission for educational purposes. Such stations can cater to the entire school system, non-formal education, adult education, continuing education, higher education, vocational education and technical education. These requirements can be reasonably serviced only if educational transmission time becomes available for a major part of the day. Radio and TV transmissions have an important role to play in bringing the remote areas within the reach of good quality education. Therefore, a dedicated educational channel is an urgent requirement.

19.2.8 The Ministry of Human Resource Development commissioned an expert assessment of the needs of programme production and training of technical personnel. Action for implementation of the measures suggested by this Group (Karnik Group) have not made progress, largely because of paucity of "resources. However, with the availability of INSAT 2A more transmission capability will be acquired and it is a hopeful sign that the GRAMSAT project is being considered by the Department of Space.

3. REVISED STRATEGY AND PROGRAMMES

19.3.1 In so far as transmission facility for educational programmes is concerned, efforts will continue for securing a reasonably large and fixed time slot on radio for transmission of educational programmes. The arrangement of decentralised scheduling of educational transmission at the level of individual radio station has not worked and possibly cannot work with a large number of radio stations in the country, with many of them not being at the National or State headquarters. Continuing inadequate availability needs to be redressed and use of radio transmission for education become a priority area. Regarding TV, efforts have to continue for securing a dedicated channel for educational transmission. With increasing capability of the successive transmission satellites, this is an attainable objective in the medium term.

19.3.2 Simultaneously emphasis would be laid on improving the quality of educational programmes and for optimum utilization of transmission facility. For this the following measures will be taken:-

(i) The remaining SIETs would be made autonomous. Production facilities in North East will be set up. Subject to availability of resources, creation of programme production facilities in other language zones not covered by SIETs will also be considered.

(ii) In SIETS association of professionals on deputation/contract will be encouraged to professionalise the working environment.

(iii) Professional talent would be associated through commissioned programmes, to supplement the in house programme production arrangements. The CIET would seek to have 10% of its programmes transmsitted on TV produced by professionals outside CIET.

(iv) The EMRCs and AVRCs would be converted into autonomous departments of the university concerned and these institutions would associate professional talent from outside on tenure/contract basis to invigorate the EMRC system. One new AVRC would be set up in each of the remaining larger states in the 8th Plan.

(v) The UGC would set up adequate master's level courses or postgraduate diplomas in various aspects of educational programme production. To optimise returns on the investments such courses would be started where EMRC/AVRC already exist so that the cost on infrastructure does not have to be repeated. To upgrade the skills of existing technical manpower involved in production of educational TV/Radio programmes, the possibility of introducing Diploma courses in suitable disciplines in certain polytechnics will be examined.

19.3.3 Viewing of the educational programmes during the scheduled transmission time by large number of students poses obvious problems both in terms of management and learner outcome. The problem tends to become unmanage-

i) **A set of PCs has been given to college for use** in educational **management and for** promoting **computer literacy.**

ii) **Starting** certificate, diploma anddegree courses in universities in Computer Science.

iii) By **giving sizeable** computers **as central computational facility for research and higher studies purposes universities have been as-**

19.4.4 In technical education sector all the IITs and major **engineering colleges have acquired sizeable computers. Computer Science is one of the high profile courses in many institutions. Provision** of computers **is also part of the World Bank assisted project for strengthening and modernising of polytechnics.**

19.4.5 Within the resources available a good coverage has been achieved in the higher education and technical education sectors but there have persisted three areas of weaknesses!

i) **The** computer **platforms provided for MCA courses are not sufficiently large and advanced to equip the students with experience on platforms which they will** encounter **in their working life.**

ii) **In many cases, the institutional faculty continues to be unconnected with the professional organisations and** work, **with the result that the faculty does not have the requisite practical skills which they can pass on to students.**

iii) **In** college sector the training and software support **is** inadequate **with the result that use of available** computers **is not optijnum.**

5. STRATEGIES AND PROGRAMMES

19.5.1 The CLASS Project would be expanded; **subject to resource availability the coverage of 2000** Senior Secondary **Schools is** envisaged in **the 8th Plan. The management system for implementation of CLASS Project** would be **strengthened and made more effective.** Access to computers **in the schools would be improved. Schools which want to charge fee to improve and extend** the facilities **for CLASS would be allowed. Computer Applications with adequate facilities of computers in schools would be** encouraged **on** operational **basis at secondary and higher secondary levels.**

19,5.3 **Access of students to computer facilities in** universities, colleges and technical **institutions Would** be improved. **Computer** facility will **be made available to students and researchers round the clock. Within the** resources **available, computer platforms forMC** A students **and** researchers **would be** upgraded. Diploma and certificate **courses in the universities and colleges would be phased out These would be left for the polytechnics and professional bodies accredited by the** Department **of Electronics.** UGC **would formulate a concrete** programme **for motivating and** encouraging teachers of Computer **Science** to **commercially link** up **with the professional agencies for mutual benefit Within die** resources'available **all the colleges will be sought to be** covered **by the computers for educational administration during the 8th Plan and the number of** computers per college and **software availability would be improved. UGC would set up effective training arrangements for college** teachers in **use of computer. UGC would also initiate a programme for starting a separate paper at Master's level for use of computers in various** subject **areas like Physics, Mathematics, Statistics, Economics, Commerce, etc. and would provide support to** universities/colleges **for** a computer room provided with adequate number of PCs. ' .

6. i RO^E OF VARIOUS ORGANISATIONS

19.6.1 The Ministry of Human Resource Development (MHRD) **would pursue with the Ministry of Information and Broadcasting, Department of Space, Department of Electronics, and Finance Ministry for augmentation** of transmission facilities **for educational programmes and, specifically, for setting up of a dedicated educational** channel. **The MHRD would also work** for obtaining **at least a minimum of resources for financing** of educational **technology programme. The CIET and the UGC would*continue to discharge a coordinating role. They would provide leadership and guidance to the institutions** and the **State agencies. The State** Governments **would be involved more meaningfully in the funding and management of educational technology programme. The CIET and the IUCEC** would reach **out to the NGOs and involve them in the educational technology programme on a really** meaningful scale. The **IUCEC would develop into a forum for bringing Government Institutions and private** professionals and policy **makers together for ensuring a** coordinated **approach** to **policy and implementation** of **the programme.**