

BASIC DESIGN STUDY REPORT
ON
THE PROJECT
FOR
PROVISION OF PROGRAMME PRODUCTION EQUIPMENT
FOR
MASS COMMUNICATION RESEARCH CENTRE
IN
THE JAMIA MILLIA ISLAMIA(CENTRAL UNIVERSITY)
IN
INDIA

DECEMBER, 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

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P R E F A C E

In response to a request from the Government of India, the Government of Japan has decided to conduct a Basic Design Study on the Project for Provision of Programme Production Equipment for Mass Communication Research Centre in the Jamia Millia Islamia (Central University) and entrusted the study to the Japan International Cooperation Agency (JICA). JICA sent to India a survey team headed by Mr. Kohsaku Tanaka, Section Chief, Engineering Division, Broadcasting Bureau, Ministry of Posts and Telecommunications, from July 1 to 20, 1990.

The team exchanged views with the officials concerned of the Government of India and conducted a field survey. After the team returned to Japan, further studies were made. Then, a mission was sent to India in order to discuss the draft report and the present report was prepared.

I hope that this report will serve for the development of the Project and contribute to the promotion of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of India for their close cooperation extended to the teams.

December, 1990

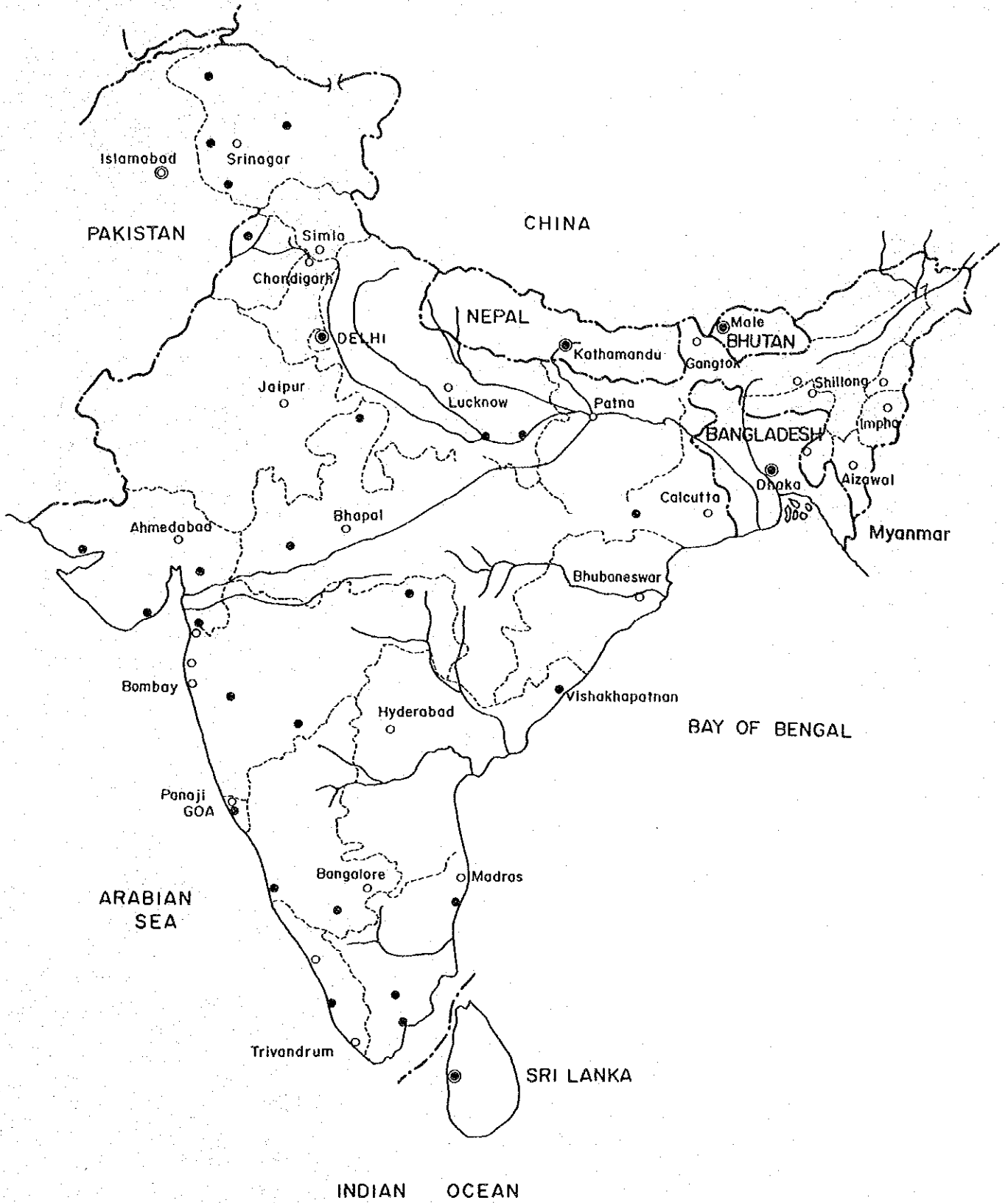


Kensuke Yanagiya

President

Japan International Cooperation Agency

INDIA



S U M M A R Y

SUMMARY

With a total population of 810 million (estimated in 1988) living on a vast territory of 3.287 million km² (about nine times the size of Japan), India forms a multifarious and complex country, that is multi-racial, multi-religious, multi-lingual and multi-cultural. Hence, for India, the promotion of mutual understanding among its people as a step toward the country's development has always been one of the most important national issues to be tackled.

In order to address this issue, the conveying to the people of correct and accurate information is most essential and that is why further development of the mass media has been greatly desired. Equally indispensable is the further spreading of education among the people to enable them to readily understand and make correct judgments on all the information conveyed to them through the mass media.

It is, in fact, against such a backdrop that, in India, efforts are being made to conduct and promote education in line with the following policies which were established in 1986:

- ① To transform the educational system so as to relate it more closely to the life of the people
- ② To make continuous effort for expanding equality in educational opportunities
- ③ To make sustained efforts for raising the quality of education at all levels
- ④ To give a special emphasis on the development of science and technology
- ⑤ To promote and cultivate moral and social values

At present, the educational system of India consists of what is called a 5-4-2-3 system which starts with primary school and ends with university. Of these 14 years, the 5 years in primary school and the 4 years in junior high school are compulsory education.

Meanwhile, higher education is conducted at 179 universities and 6,040 colleges across the country under the supervision of the University Grant Commission (UGC). Of the 179 universities, 10 are central universities and the others are state universities. The Jamia Millia Islamia University, which is the executing organization for this Project, is one of the ten central universities.

The spreading of higher education as mentioned above has recently been particularly remarkable. About a ten-fold growth has been seen during the last 40 years both in the number of schools and that of students.

However, the facilities for higher education are almost all centralized in the large cities, and such issues as lack of teachers, insufficiently equipped facilities, etc., are problems in the regional areas. Thus big regional gaps in quality still remain.

In recent years, special efforts have been made to make positive use of radio and television broadcasts to make up for the regional differences in primary and higher education. As a part of these efforts UGC had started to broadcast regular TV programmes for higher education through Indian National Satellite (INSAT).

Let us now turn our eyes to the present status of the mass media. First, in radio broadcasting, which is conducted by All India Radio (AIR), 95% of the population and 84% of the nation's territory are covered by 137 medium-wave transmitters, 39 short-wave transmitters and 8 FM transmitters through a total of 100 radio broadcasting stations. The programmes are produced mainly in English and also in 264 different local languages.

Television broadcasting is conducted by Doordarshan India (DDI). Although the expansion of the TV broadcasting network was quite slow at the beginning, a gradual development has been achieved since the launching of INSAT in 1983. Today, TV broadcasts cover 77% of the population and 56% of the total land area by means of transmissions conducted through 19 TV broadcasting stations and 525 TV transposer stations. However, the above-mentioned numbers of stations are substantially below those of the radio/TV broadcasting stations and transmitting stations planned to be established under the 7th 5-year National Development Plan (1984-1989). As one of the reasons for this, the shortage of talented people in the broadcasting field has been raised. Incidentally, the estimated numbers of radio receivers and TV sets in India today are about 30 million and 9 million, respectively.

In India, films are extremely popular. The nation takes pride in being Number One in the world in the number of films it produces annually, which is more than 800. There are more than 13,000 cinema theaters in India, serving some 13 million visitors a day. As for newspapers, about 25,000 different papers are published in 19 languages, their total

circulation reaching some 18.72 million. Yet, in India, this is only about 2% of the total population.

Reflecting the trend toward improvement and expansion of the mass media in India, there has been a spectacular rise in the requirement for human resources to work in the field of mass communication media. One example is that, during the last three years, the number of staff members has been increased by a total of 8,100 at AIR and DDI. And in the Eighth 5-year National Development Plan (1990-1994), a further increase of about 20,000 staff members has been planned.

It was against such a backdrop that the Jamia Millia Islamia University, a central university located in New Delhi, established the Mass Communication Research Centre (MCRC) as part of the institution in 1983. The MCRC is a higher-educational institution having only a 2-year master's course whose objective is to educate and train programme producers to work in the broadcasting and film fields. It also produces, at the request of UGC and others, about 280 programmes a year for use in educational broadcasts. At present, a total of 96 staff members are engaged in the education of students and in the production of programmes. Thus, MCRC conducts wide-ranging lecture and practical training courses, thereby playing an important role as India's only educational organ specializing in the training of people in the fields of broadcasting and film production. In fact, the graduates of MCRC hold positions in various quarters including DDI, AIR, the Indira Gandhi National Open University (IGNOU), ministries, public organizations, private firms and film companies. The educational programmes produced by MCRC are used effectively through UGC in actual university education and social education. The programmes are also broadcast by DDI. Thus, the MCRC has been playing a very large role in India's broadcasting and film production and has been having a great effect on developments in these fields. However, as far as its facilities and equipment are concerned, it must be pointed out that the MCRC is faced with a number of problems that must be overcome. The existing facilities and equipment are those installed in 1983 at the time of its opening. As a result, MCRC has not been able to respond effectively to the pressing need of achieving qualitative and quantitative improvement in the production of programmes for educational broadcasts for which the demand has been rising steadily. And because of the inadequacy of facilities, MCRC has been able to accept only 30 students a year whereas the annual number of applicants exceeds 800. For

that reason, the Indian government decided on expanding the MCRC and has completed the construction of a new studio building. However, with regard to the equipment for programme production which are required to be additionally installed in this studio building, difficulty has been faced by the MCRC in carrying out its plans owing to lack of funds. It was, in fact, under such circumstances that the Indian government in November 1988 requested Japan to provide grant aid assistance for the procurement of equipment for use at the MCRC in the training of personnel and also in programme production.

In response to this request, the Japanese government decided to conduct a Basic Design Survey for "THE PROJECT FOR PROVISION OF PROGRAMME PRODUCTION EQUIPMENT FOR MASS COMMUNICATION RESEARCH CENTRE IN THE JAMIA MILLIA ISLAMIA (CENTRAL UNIVERSITY) IN INDIA" and the Japan International Cooperation Agency (JICA) accordingly sent a Basic Design Study Team to India for twenty days from July 1 to 20, 1990.

The results of the above-mentioned Basic Design Study are as follows:

This Project, with the aim to upgrade the personnel-training functions and the programme-production capacity of MCRC, will supply the following equipment to the new studio building provided by the Indian side;

- (1) Video programme production Studio-1 equipment
- (2) Video programme production Studio-2 equipment
- (3) Audio programme/Dubbing Studio equipment
- (4) Post-production Studio equipment
- (5) Master control room
- (6) Editing equipment
- (7) Outdoor coverage equipment
- (8) Still-photograph equipment
- (9) Presentation equipment
- (10) Power-source equipment
- (11) Measuring instruments
- (12) Spare parts, etc.

As for the construction work for which the Indian side is responsible, all the facilities have already been completed except for the remodelling of the sub-control room portion of the video programme production studio.

As to the period of construction, it is estimated to be about 9 months from the signing of the Contractor Contract.

The execution of this Project and the running of the facilities after completion of the Project will be conducted by the Mass Communication Research Centre (MCRC) of the Jamia Millia Islamia University. The Jamia Millia Islamia University is one of the ten central universities established and maintained by the central government of India and therefore the Ministry of Human Resources, which is the highest supervisory ministry, has been extremely keen on seeing this Project being brought to reality. The annual budget of UGC, which is the overseeing authority of MCRC, is approx. 3.5 billion rupees. The scheduled increase for personnel expenses and maintenance and repair expenses after implementation of this Project is estimated at 13.1 million rupees. This scheduled increase would account for only 0.4% of the annual UGC budget. Besides, in view of the achievement already made in completing the new studio building and the fact that the budget allocation for 1990 has been increased by 50% from the amount for 1989, there seems to be no particular problem about the MCRC's ability to carry out this Project nor about the system of operation and maintenance after completion of this Project.

As a result of the completion of this Project, the work of MCRC will be expanded substantially as follows. Whereas 30 students are currently being accepted each year for a 2-year master's course, which means that a total of 60 students are enrolled at the MCRC every year, this 2-year course will be extended to a 3-year course and each class will be increased to 60 students, so that a total of up to 180 students will be enrolled at the MCRC every year. Furthermore, whereas the students at present are confined to programme production staff such as producers, a course for the training of engineering personnel is also being planned to be opened.

The number of educational programmes to be produced at the MCRC is also scheduled to be a bit more than doubled in response to the needs expressed by educational circles.

As mentioned above, this Project, through an increase in the supply of excellent human resources, is expected to contribute substantially to the reinforcement of the infrastructure of mass communication media and, through the provision of educational programmes, to help achieve equality in the people's opportunities of receiving education by eliminating the

regional gaps in college education and social education. Thus, this Project will contribute greatly to the improvement and expansion of the mass media and the spreading of education, both of which are essential for the promotion of mutual understanding among the people in India. For that reason, this Project as a grant aid project can be considered to be of great significance.

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2. Study Schedule
3. List of Interviewees
4. Minutes of Discussions
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6. Data concerning India

CHAPTER 1 Introduction

CHAPTER 1 Introduction

In India, a country that possesses a vast territory and a huge population, the government has always attached great importance to the development of human resources as the basic condition essential to national development. And the government believes that, as a means of developing human resources, education through broadcasts, which has an excellent ability to send information over a wide area, is the most effective. However, in the field of broadcasting in India, there is a definite shortage in human resources, and qualitative and quantitative improvement in human resources development has now become a matter of great urgency.

In order to respond effectively to this demand, the Jamia Millia Islamia University located in New Delhi established the Mass Communication Research Centre (MCRC) in 1983. The objectives of the MCRC are to educate and train the software engineers in the fields of broadcasting and films and to produce educational programmes for radio and TV broadcasting and for films. Thus, the MCRC has a very important role to play in the mass media of India. However, in the aspect of its facilities and equipment, the MCRC has a number of problems to overcome. It has been operating with only one temporary studio and most of its equipment are not only superannuated but also are quantitatively inadequate. Under these circumstances, the MCRC can neither conduct adequate personnel training nor respond effectively to the steadily increasing demands. Hence, the Indian government decided to expand the facilities of the MCRC and has completed the construction of a new studio building. However, as to the equipment to produce programmes for radio, TV and films which are required to be installed in the studio building, difficulty has been faced in meeting the requirements owing to financial reasons.

It was under such circumstances as mentioned above that the Indian government in November 1988 requested Japan to provide grant aid to assist in procurement of equipment for the training of radio, TV and film production personnel and for the production of educational programmes at the MCRC.

In response to this request, the Japanese government decided to conduct a Basic Design Study and sent to India a Basic Design Study Team headed by Mr. Kohsaku Tanaka, Section Chief, Engineering Division,

Broadcasting Bureau, Ministry of Posts and Telecommunications, for a period of twenty days from July 1 to 20, 1990.

The Study Team thoroughly confirmed the background of this Project and the contents of the request made by the Indian government and, at the same time, conducted a series of studies on the operations of the MCRC, the condition of the new studio building, the current status of broadcasting services and education in India, and so forth. The Study Team also gathered necessary materials and took part in consultations with the Indian counterparts.

After the studies in India were completed, the Study Team, in the course of its further studies in Japan, examined the effects of this Project and its appropriateness as an object of grant aid assistance. The Study Team conducted the basic design concerning the contents and scale of the equipment necessary and most appropriate for the grant aid and a mission was sent to India in order to discuss the draft report. Then, this report was compiled to present the outcome of the studies.

The Minutes of Discussions, composition of the Study Team, study schedule and the list of the officials whom the Study Team met for consultations are included in items 1-6 of the APPENDIX of this report.

CHAPTER 2 Background of the Project

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2-1 Background of the Project

2-1-1 General Conditions of India

India is located in southwest Asia and has the shape of an inverted triangle measuring about 3,200km from north to south and about 3,000km from east to west. To the east, India borders on Myanmar, Bangladesh and the Bay of Bengal, to the west on Pakistan and the Arabian Sea, to the south on the Indian Ocean, and to the north on Nepal and, via the Himalayas, the roof of the world, on China. It is a huge country with a total area of 3.287 million km² (about nine times the size of Japan) and a total population of 810 million (estimated in 1988).

The territory of the nation contains a fertile flatland which benefits from the influences of the Himalayan region and the Ganges. The entire territory may be divided into three regions; northern India which is the centre of the Indian economy, the partially-flat area to the south of the Mahanadi and Narmada rivers, and the Deccan Plateau which is 500m-1,200m above sea level.

The origin of the civilization of India can be traced back to the Indus Civilization, one of the four great civilizations of the world, which prospered around 2500 B.C. in the basin of the Indus River centering around Harappa and Mohenjodaro in the present territory of Pakistan. From around the time after the invasion of the Aryans from the west around 1500 B.C. to the establishment of Buddhism in the 6th century B.C., the basin of the Ganges and the Jamna rivers became the centre of culture and numerous small countries were established one after the other. As for religion, Brahminism was established and the caste system took root. And from the 6th to the 5th century B.C., Buddhism continued to spread.

In 711, the Muslims invaded India and, in the latter half of the 12th century, replaced the Hindus and held sway there. After that, the advance of the Europeans to the east began. Following the arrival of Vasco da Gama from Portugal on the west coast of India in 1498, Portugal, Holland, Britain and France competed fiercely for dominance. In 1600, Britain established the East India Company and pushed ahead its colonization of India, taking advantage of such incidents as the disputes between the shiekdoms within India. In 1858, Britain suppressed revolts and made India a colony under its direct control.

Then, the Indian movement for independence started and this developed into anti-British struggles. In 1947, after the end of World War II, the struggle for independence that continued for more than half a century was brought to an end and India achieved its independence, separating itself from Pakistan.

India is a multi-racial, multi-religious and multi-lingual nation. It forms a multifarious and complex society because of the big gaps existing between different social classes on economic, educational, cultural and other levels.

The trade between India and Japan has steadily been increasing each year. In fiscal 1988, India's exports to Japan amounted to 1,804 million U.S. dollars, while its imports from Japan totalled 2,082 million U.S. dollars. India's principal exports to Japan comprise such items as iron ore, shrimps and diamonds, while its principal import items from Japan are such products as machinery, steel and chemical goods.

Up to 1988, Japan's yen credits amounted to 950 billion yen and grant aid assistance to 42.2 billion yen.

Since India's independence, the relations between India and Japan have continued to be friendly and to become closer each year through special arrangements between the two countries, such as the setting up of a Japan-India Study Committee, a private organization to study various questions concerning cooperation between the two countries in wide-ranging political, economic and cultural activities and to submit proposals to each of the two governments.

One of the major international cooperation projects carried out by Japan to assist India in the field of broadcasting is the project to reinforce the programme production equipment at the Indira Gandhi National Open University, the project executed in 1989-1990.

2-1-2 Educational System in India

In India, since education became the common responsibility of the central and the state governments in 1976, the execution and promotion of education has been handled by the Educational Headquarters of the Ministry of Human Resources, which has been operating through the following organizations:

- University Grants Commission (UGC)
- National Council of Educational Research and Training (NCERT)
- National Institute of Educational Planning and Administration

- Indian Institute of Advanced Study
- Indian Council of Social Science Research
- Indian Council of Historical Research
- Indian Council of Philosophical Research
- Central Board of Secondary Education
- Central Institute of Indian Languages
- Indira Gandhi National Open University (IGNOU)

Furthermore, at a conference held in 1986 to discuss national educational policies, the following policies were established, placing emphasis on the necessity of carrying out a radical realignment of the educational system:

- ① To transform the educational system so as to relate it more closely to the life of the people
- ② To make continuous effort for expanding educational opportunities
- ③ To make sustained efforts for raising the quality of education at all levels
- ④ To give a special emphasis on the development of science and technology
- ⑤ To promote and cultivate moral and social values

(1) School Education System

India's school education system basically resembles that of Japan. As shown in Fig. 2-1-1, compulsory education is given at primary schools (5 years, starting at the age of six) and junior high schools (4 years). After completing this compulsory education, the students advance to high schools (2 years) and then to universities (3 years).

1) Compulsory Education

As for compulsory education, the attendance rate at primary schools is about 98% (1989) while the rate at junior high schools is only about 50% (1989). Based on this present situation, the Ministry of Human Resources plans to improve the attendance rate at junior high schools to 85% with 1995 as its target year. As for the concrete measures to achieve this target, the Ministry, noting the fact that the graduation rate at primary schools is extremely low at 55% as against the attendance rate of 98%, has been endeavouring to promote the policy of making compulsory

education free of charge and to thereby enhance the graduation rate at primary schools. This has been based on the judgment of the Ministry that attainment of the target mentioned above would be impossible as long as the present low graduation rate at primary schools remains unimproved.

Meanwhile, in order to ensure that education is spread further among the people, that regional gaps are eliminated and that education itself is qualitatively improved, the Ministry of Human Resources, based on its judgment that the use of TV and radio would be most effective, has been broadcasting educational programmes on TV and radio in cooperation with DDI and AIR. Furthermore, in order that the educational broadcasts may be utilized more extensively and more effectively, the Ministry has been distributing TV sets and radio receivers to primary and junior high schools. The textbooks for school-broadcast programmes are printed every year in one lot, and distributed to the schools in advance by the organization conducting educational broadcasting in each state in the form of pamphlets.

2) Higher Education

At present, higher education is conducted at 179 universities and 6,040 colleges across the country under the supervision of the University Grants Commission (UGC). Out of the 179 universities, 10 are central universities and the rest are state universities. University education is normally conducted through 3-year courses, but in the case of engineering and architecture, 4-5 year courses are adopted, while some universities run a 4.5-year course for pharmacy students. Table 2-1-1 shows the transitions in higher education between 1950 and 1989. Considering the fact that the numbers of universities and colleges were only 27 and 695, respectively, in 1950, it is noted that the numbers of institutions of higher education have increased by about ten times in 40 years. The number of students has also increased about ten times. Particularly notable has been the increase in the number of female students; about 26 times as many in 40 years.

Table 2-1-1. Transitions in Higher Education
between 1950 and 1989

Item	1950	1989
Universities	27	179
Colleges	695	6,040
Number of Students	362,323	3,882,000
Attendance Rates (Applicable ages: 17~25)	0.8%	5%
Number of Female Students	43,000	1,195,000
Number of Teachers	18,700	242,000

Furthermore, for lifetime education, at a total of 45 educational institutions in remote regions, such as adult education centres, about 350,000 people who had not been able to receive compulsory education because of regional environmental reasons or financial reasons are currently attending classes.

Higher education is well distributed throughout India. However, almost all of the facilities for higher education are centralized in large city areas.

There are big gaps in the quality of higher education among the regional areas, because of the shortage of teachers and insufficient facilities.

3) University Grants Commission (UGC)

The UGC is an organization established in 1956 for the purpose of spreading and promoting higher education in India. Its objectives are: ① to establish regulations in higher education, ② to adjust the relations between the universities and other related organizations, ③ to spread higher education and ④ to enhance and maintain educational levels. The running of the ten central universities in India is financed by budgets allocated by the UGC.

The UGC in 1983 started regular broadcasts of higher-education TV programmes using INSAT (Indian National Satellite), simultaneously with the launching of the satellite that year.

This regular programme aims primarily to spread higher education to regional areas in accordance with one of the National Education Policies, that is, to make continuous efforts to expand equality in educational opportunities.

This regular broadcast of higher-education TV programmes is called the "Countrywide Classroom (CWCR)" which is broadcast twice every day excepting Sundays, first in the afternoon from 1:00 to 2:00 and then a repeat broadcast in the evening from 4:00 to 5:00, using the satellite and DDI's nationwide network.

These CWCR programmes are produced by the Educational Media Research Centres which are attached to nine of the state universities across the country, as well as by the MCRC which produces the greater part of the CWCR programmes, and then are sent to the UGC for broadcast.

The UGC also dubs the CWCR programmes onto cassette tapes (VHS) for sale to universities and related organizations.

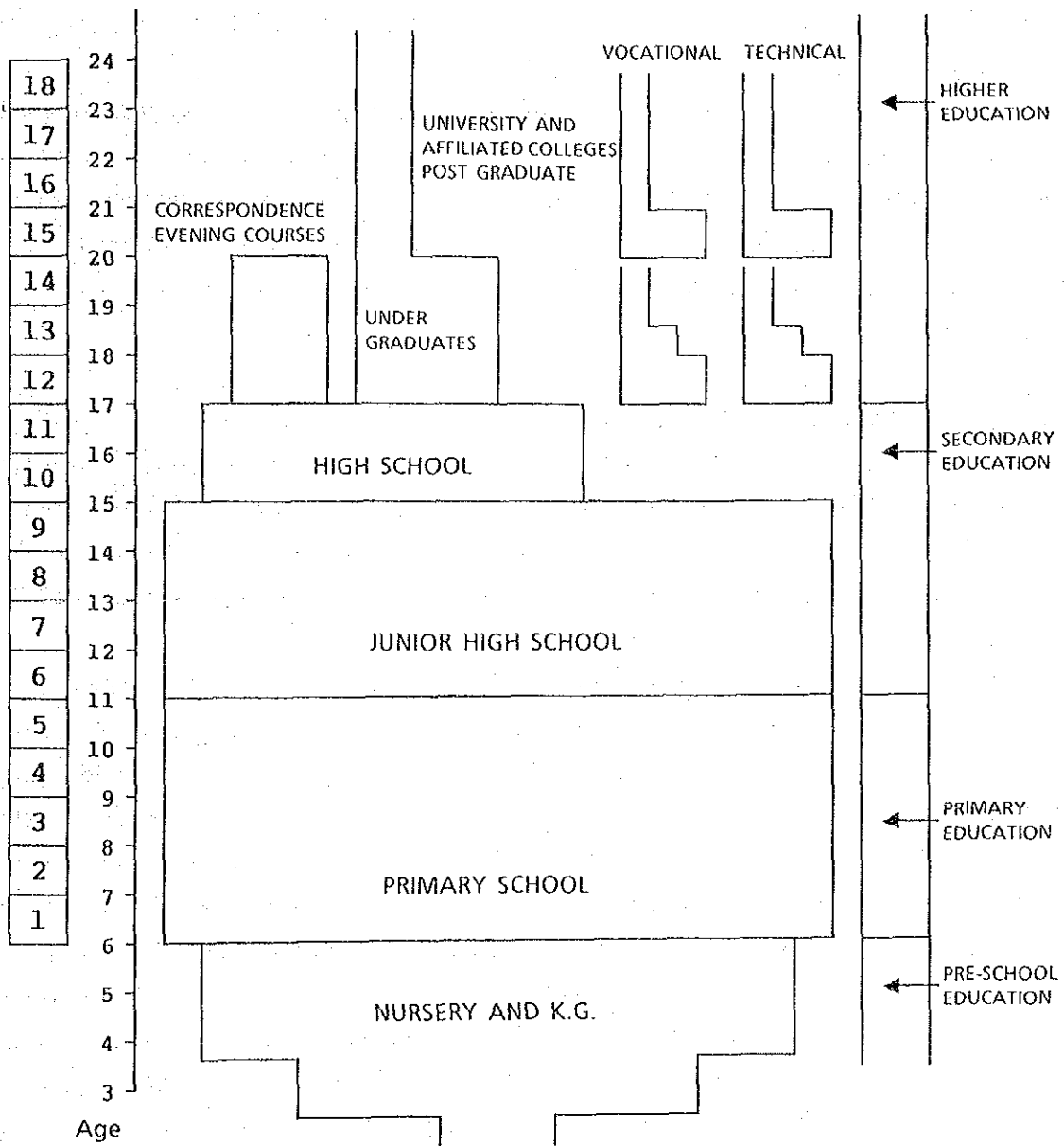


Fig. 2-1-1 Diagram of School System in India

2-1-3 Mass Media in India

(1) Broadcasting

The broadcasting services in India are all operated by the All India Radio (AIR) and Doordarshan India (DDI), both of which belong to the Ministry of Information and Broadcasting.

As for their financial resources, the licence fee system was adopted at the beginning but this system was abolished in 1985 when the income from advertisements was found to exceed the income from licence fees. At present, the broadcasting services depend entirely on the revenues from the government subsidy as well as commercial broadcasts.

1) AIR

(a) Radio Broadcasting Network

As of 1989, the AIR has a nationwide network operated with 100 radio broadcasting stations, 137 medium-wave radio transmitters, 39 short-wave transmitters and 8 FM transmitters. It covers 95% of the total population and 84% of the total area of the nation.

The programme transmission network consists of relays from New Delhi via the INSAT satellite and the terrestrial relay circuits. At present, in order to supplement the inadequacy of the terrestrial circuits, efforts are being devoted to the reinforcement of the satellite circuits. In 1985/86, a 5-channel device to receive satellite transmissions was set up at each of the radio stations in India. Furthermore, in addition to the 2-channel uplink satellite communication system originating in Delhi, a 1-channel uplink was set up in each of the stations in Bombay, Madras and Calcutta. As a result, the quality of the programmes broadcast in each region has been improved substantially.

(b) Radio Broadcast Programmes

Because India is a multi-lingual nation of a scale rarely seen in the world, the AIR produces its programmes in 264 local languages as well as in Hindi and English as the two main languages in which the greater part of the programmes are produced and broadcast. As for the contents of the programmes, emphasis is placed on social educational effects

and efforts are made in various ways to enhance such effects. In radio broadcasting, the entire country is divided into 4 regions, each of which is taken charge of by a broadcasting station; northern India by the New Delhi station, eastern India by the Calcutta station, western India by the Bombay station and southern India by the Madras station.

Each station conducts programming differently and broadcasts the programmes at different hours. The programming schedule of a regional broadcasting station normally consists of news, cultural programmes and other programmes befitting the actual conditions of the region concerned, which originate from the supervision station located in the state capital concerned, as well as the news originating from the Delhi station.

The characteristics of the programming of the radio broadcasts can be found in the fact that importance is attached to programmes that can be of direct use to the development of India. Thus, in addition to cultural, information and entertainment programmes, many programmes are broadcast dealing with agriculture, small-scale industries, hygiene, health and family planning.

In particular, from 6:00 to 8:00 in the evening, all the stations make it a practice to schedule the broadcast of programmes intended for listeners in the rural villages. The programme titled "YUBABANI" (Voice of Youth) is one of the most popular programmes broadcast by the AIR, as a programme of the youth, for the youth and by the youth.

2) DDI

(a) TV Broadcasting Network

The TV broadcasting in India was first started in September 1959 when UNESCO established a pilot centre in New Delhi. The regular TV broadcasting service got off to a start in 1965 from the New Delhi station. The Bombay station, which became the second station in India to start TV broadcasts, was, however, not opened until 1972, seven years after the start of regular TV broadcasts by the New Delhi station. That was because the Indian government had given the top priority to the solving of the poverty problem in the rural

regions and had delayed the development of TV services. Consequently, during those times, the expansion of the TV broadcasting network made little progress.

However, when the INSAT-1B satellite became operational in October 1983 and the special plans to expand TV broadcasting services began to be pushed ahead, the TV broadcasting network in India began achieving development.

As of 1989, DDI, through 19 TV broadcasting stations and 525 TV transposer stations, is covering 77% of the total population and 56% of the entire territory of India.

(b) TV Broadcast Programmes

Within its vast territory, India has a number of states and regions with different languages, manners and customs. In addition, because its territory spreads widely from east to west, people living in different regions often find it hard to adjust their actual day-to-day activities to India's standard time. That is why in TV programming, the same as in the case of radio programming, each of the TV broadcasting stations adopts its own policy in programming and in determining broadcasting schedules. In other words, each station adopts its own programming and broadcasting schedules in carrying on its daily activities in such a way as to suit the actual conditions of the region it serves.

The characteristics of TV programming in India can be seen in such facts as that, during the daytime, general programmes such as information and traditional arts or entertainment, school broadcasts for junior high schools and higher-education programmes on a university level are broadcast, while in the evening, information, news, entertainment and other types of programmes account for the greater part of the regular broadcasts. Among the various programmes broadcast daily, one that deserves special mention is the regular broadcast, conducted through all the TV stations, of the "Hour for Agriculture" which has been set up by DDI in its belief that "India is a country based on agriculture and it is the mission assigned to DDI to broadcast programmes designed to promote agriculture."

Meanwhile, DDI's 2nd TV service was inaugurated in Delhi in September 1984 and in Bombay in May the following year, 1985. At present, this 2nd TV service is conducting broadcasting in all major cities for two hours a day from 6:30 to 8:30 in the evening. The objective of the 2nd TV service is to meet the viewers' wishes to have a wider choice of programmes and this service is scheduled to be expanded in stages across the country.

3) Expansion Plans for Radio and TV Broadcasting

The Indian government planned the following construction plan to upgrade programme production and expand the broadcasting network for radio and TV broadcasting as a target at the end of the 7th 5-year National Development Plan (1985~1989).

(a) Radio Broadcasting Network

	Number of Stations (Planned)	Number of Stations (1989)
Radio Broadcasting Station	203	100
MW Transmitting Station	150	137
SW Transmitting Station	54	39
FM Transmitting Station	104	8

(b) TV Broadcasting Network

	Number of Stations (Planned)	Number of Stations (1989)
TV Broadcasting Station	45	19
TV Transmitting Station	306	525

(c) Comparison of Allocated Budget with Other Media

	Sixth 5-year Plan	Seventh 5-year Plan
DDI	133.70 Crore Rp	700 Crore Rp
AIR	84.80 Crore Rp	700 Crore Rp
Film	16.98 Crore Rp	41.51 Crore Rp
Others	8.47 Crore Rp	30 Crore Rp

As mentioned above, the amounts of funds allocated to developments in the field of broadcasting have been showing a spectacular growth, indicating the fact that developments in broadcasting area seen as in urgent for the development of the country.

Even so, the planned targets have hardly been attained. One of the factors which has been considered as a cause for the slow progress being made in the development of broadcasting in India is the shortage of talented people in the broadcasting field, along with the fact that funds made available are still inadequate.

4) School Broadcasts by Radio and TV, and Their Use

School broadcasts by radio were first started at Calcutta in 1937. Today, school broadcasts by radio are conducted by almost all of the radio stations five days a week. At first, school broadcasts were centered on those for primary schools because the programmes for junior high schools do not quite match the subjects taught in school classrooms. Later on, however, it was found that, for junior high schools, English language lessons were suitable and subsequently such programmes came to be broadcast to junior high schools.

The contents of broadcasts are in line with classroom teaching. Radio receivers are allocated to each school by the central and state governments.

At present, the annual schedule and contents of the school broadcast programmes is printed each year for advance distribution to the schools in the form of pamphlets by the organization conducting educational broadcasting in each state.

Meanwhile, since 1966, broadcasts of correspondence courses in liberal arts subjects of the Delhi University have been conducted by a short-wave transmitting station in Delhi.

Further, in 1977, similar correspondence courses of the Madura University also started to be broadcast on radio. As for the school education broadcasts by TV, the broadcast of programmes for junior high schools was started in 1961 from Delhi. Then, in 1975, school broadcasts on TV for primary schools began and this sent a fresh breeze into the classrooms.

Furthermore, when INSAT was launched in 1983, the UGC started regular TV broadcasting to enhance the effect of its services for university students.

These regular broadcasts are called "Countrywide Classroom (CWCR)" which is transmitted twice a day through the nationwide network of the DDI using INSAT. Each CWCR programme is broadcast twice every day excepting Sunday, once in the afternoon (1:00-2:00) and again in the evening (4:00-5:00), the latter being the repeat of the afternoon broadcast.

The programmes broadcast are educational programmes of wide-ranging contents including agriculture, science, art and general culture.

In order to ensure that these educational TV broadcasts are used more effectively and widely, the Ministry of Human Resources distributed a total of 450,000 TV sets to schools across the country during the period of the Seventh 5-year National Development Plan. The Ministry plans to further distribute TV sets to schools during the period of the Eighth 5-year National Development Plan, too, at the rate of 90,000 sets a year.

5) Present Status of Diffusion of Radio and TV Receivers

As of 1989, the diffusion number of radio receivers in India was about 30 million sets, while that of TV sets was estimated at about 9 million. Assuming that the total population of India is about 810 million and that the average number of members in each household is 6.5 persons, then, the diffusion ratio of radio receivers would be about 25% and that of TV sets, about 7%.

(2) Film

In India, films enjoy the enthusiastic support of all people. In fact, in no other country in the world are films so dearly loved by the people.

In this country, the annual output of films far exceeds the United States and Japan. With 912 films in 1985 as a peak, annual film production has constantly exceeded 800 during the past years, always boasting the position of Number One in the world.

In India, there are more than 13,000 cinema houses across the country. Admissions range from 8 rupees for 1st-class seats to only 2 rupees for the cheapest seats. The daily number of visitors to cinema houses is estimated at 13 million.

A number of reasons may be given to explain why films are so enthusiastically supported by people in India. First, there is no other equally powerful means of entertainment. Second, Indian films, which have firmly succeeded the traditional forms of popular entertainment in India, continue to fascinate the people. Third, since the illiteracy rate in India is still high, access to publications is limited to only a relatively limited group.

With such a high popularity among the people, films also have an enormous influence on them. Hence, the government, in an effort to further promote the film industry, established the National Film Development Corporation and provides loans to assist in the production of films. Among the supervisory organs of the Ministry of Information and Broadcasting, the ministry in charge of the film industry, there are the Directorate of Film Festivals, which coordinates all the film festivals held in India every year, and the National Film Archive of India which has its branch offices in Puna and three other cities in the country.

There are also film research institutes to foster film industry people, one each in Puna and Madras. Students of film production from overseas as well as from various parts of India come to these institutes to study film production techniques, including directing, filming and editing.

However, ever since the TV broadcasting network began to be established nationwide, the people of India have become more and more attracted to TV culture and this trend has been further promoted by the spreading of video that began several years ago. So, it also is a fact that the world of films is somewhat on the decline.

(3) Newspapers

Reflecting the fact that India is a multi-racial and multi-lingual nation, there are currently published in this country as many as some 25,000 different newspapers, including those of either national or regional circulation. The five major dailies are the "Times of India," "Navbharat Times," "Hindustan Times," "Hindustan" and "Indian Express." All the newspaper companies are privately-owned and relative freedom of speech is guaranteed.

The newspapers are published in 19 different languages including Hindi, English and various local languages.

As of 1988, the total circulation of daily papers was about 18.7 million which, however, accounted for only about 2% of the total population, about 15% of the total number of households and about 5% of the literate people in India. Although the newspaper circulation tends to increase every year, it still continues to be insufficient. (Total circulation of the dailies in Japan as of 1989 is about 70 million.)

As for the languages used in the newspapers, Hindi accounts for about 29%, English, about 19%, Malayalam, about 8%, followed by Marathi, Gujarati and others, in that order.

(4) Indira Gandhi National Open University (IGNOU)

Indira Gandhi National Open University, which aims at achieving the following objectives, is a central university established in 1985 to expand the higher educational opportunities for all people in India.

- 1) Providing opportunities for higher education to large segments of population and seeking to achieve the educational well-being of the community;
- 2) Promoting the concept of distance learning in the country by coordinating and standardizing the distance education systems throughout the country;
- 3) Providing access to higher education to the disadvantaged groups and individuals and to unlock opportunities for upgrading knowledge and skills;

- 4) Bringing higher education to the doorsteps of all those who look for it;
- 5) Promoting national integration and integrated development of the human personality;
- 6) Providing high-quality education at the university level.

At present, the IGNOU is operated under the organization shown in Fig. 2-1-2 and about 4,400 students are studying at the four regional centres and 37 study centres.

Major courses provided by IGNOU are History, Political Science, Public Administration, Management, Commerce, Psychology, Economics, Sociology, English Literature, Hindi Literature, Mathematics, Zoology, Botany, Computer Science, Electronics, etc.

The method of instruction followed by the IGNOU at the study centres consists of:

- ① Specially prepared lessons as printed materials
- ② Audio/Visual inputs (videocassettes)
- ③ Personal tutoring and counselling

It possesses only a temporary studio and does not produce its own full-scale programmes. But it has a plan that a Programme Production Centre will be constructed on the campus to produce its own programmes following its own curriculum, and the produced programmes will be broadcast through DDI.

At present, the classes are conducted through the process of distributing to the study centres in various regions the teaching material tapes provided by Britain and those produced by itself using its limited range of facilities and equipment.

Meanwhile, in 1989, assistance in the provision of equipment was given by the Japanese government in the form of grant aid and, as a result, the IGNOU was supplied with such equipment and facilities as post-production equipment, editing equipment and outdoor coverage equipment.

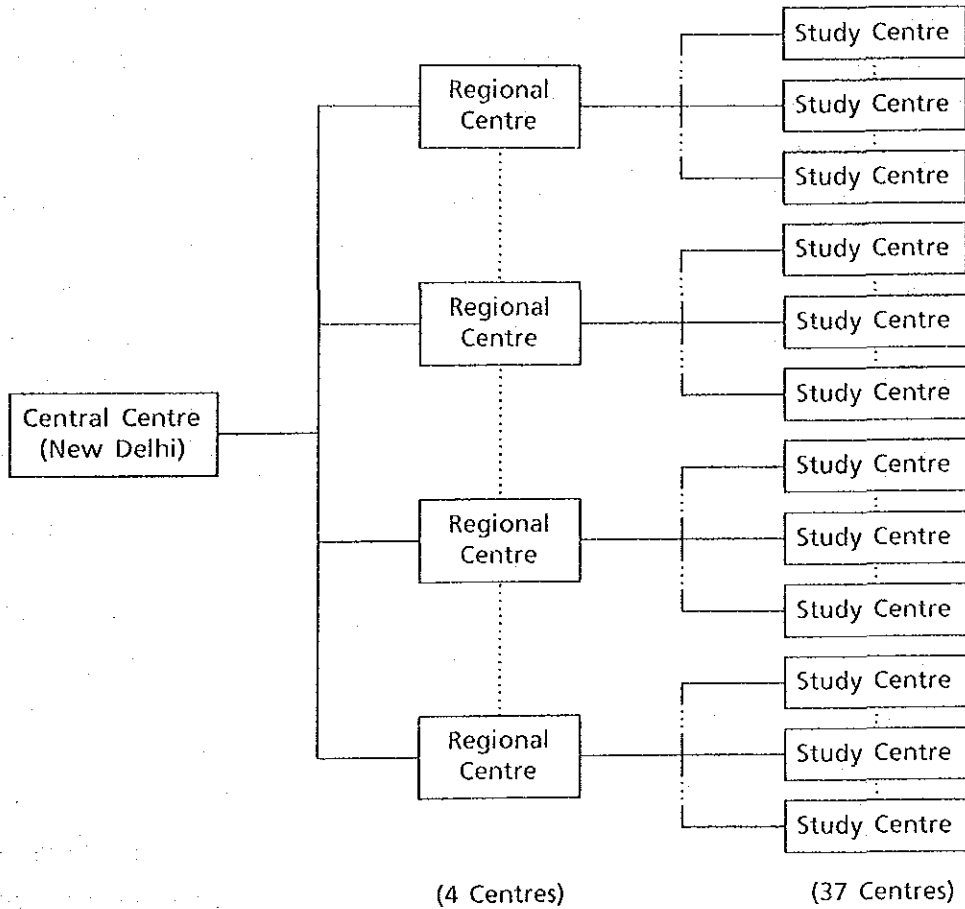
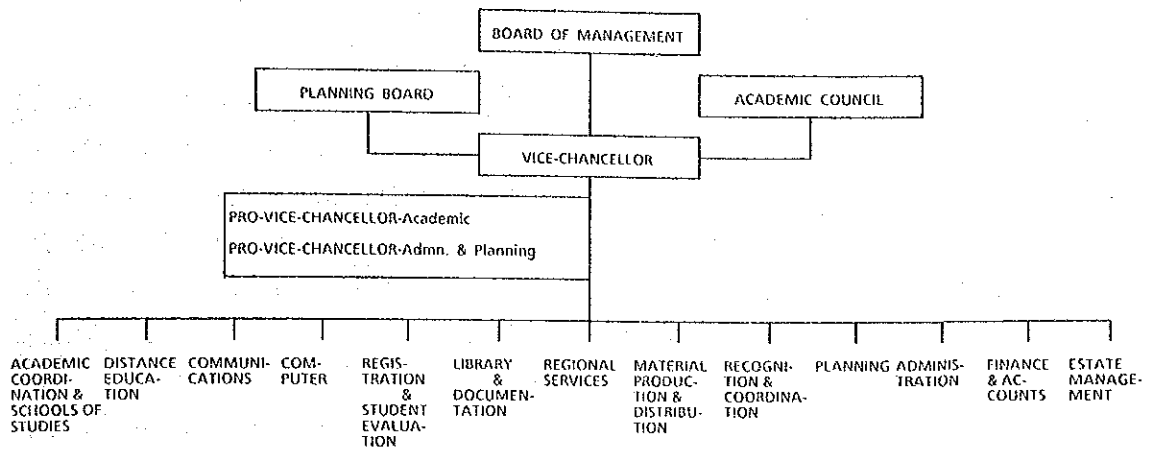


Fig. 2-1-2 Organization and Structure Chart of IGNOU

2-1-4 National Development Plans in India

(1) Outline of Five-year National Development Plan

The Indian government since 1951 has been carrying out a series of Five-year National Development Plans for the socio-economic development of the nation, upholding such targets as "Overcoming Poverty," "Promoting Employment" and "Reforming the Systems." So far, the plans up to the 7th 5-year National Development Plan (1985-1989) have been carried out. The 8th 5-year National Development Plan was established by the Rajiv Gandhi administration, but as a result of the change in political power that took place following the general election in November 1989, the Plan is now being reviewed by the new administration. These plans have steadily been leading India towards the establishment of a modern nation and it may be said that the achievements of these plans were aptly described by the then Prime Minister Rajiv Gandhi when he said, in effect, as follows in 1987:

"The Five-year National Development Plan is the most powerful means for building India as a modern self-reliant industrial economic state. Indian industry today is highly diversified, producing a wide range of products, many embodying a high level of technology. The public sector has a commanding presence and has played a pioneering role in many areas. As a result, we have a broad entrepreneurial base and ample technological and managerial manpower."

(2) National Development Plans in the Field of Education

In the 6th and the 7th 5-year National Development Plans, the government noted the need of carrying out a basic reform of the educational system in India and accordingly has drawn up the following plans to be implemented basically in line with the national educational policies adopted in 1986:

1) Primary and Secondary Education

- In view of the current condition where 30% of the schools in India are still inadequately equipped in terms of buildings and other facilities, efforts will be made to improve the situation within the national development budget.

- In view of the current condition where a very large number of schools are run with only one teacher, measures will be taken to enable these schools to be stabilized and be upgraded by such means as assigning additional teachers or merging two or more schools together.
- In order to enhance the quality of teachers, efforts will be made to give them pre-service and in-service training.
- Educational curricula will be reorganized to make them better match the actual conditions in each region.

2) Higher Education

- Measures will be taken to improve the quality of higher education.
- Further expansion will be made of higher education to foster the human resources required in promoting the National Development Plans.
- Regional gaps in the opportunities to receive higher education will be narrowed by reinforcing the facilities for higher education.

3) Adult Education

- The adult education curricula will be reorganized into those that are more in line with the actual living environment of the adult education students and to make such curricula more useful for socio-economic development.
- Efforts will be made to spread adult education to women, to people in the rural districts and also to the regions which are lagging behind in education.
- The existing adult education facilities will be improved and expanded so as to enhance the effectiveness of the education given at those facilities.

4) Vocational Education

- Measures will be taken to reinforce the human resources in such scientific and technological fields as computers, medical service, electricity and communications.

2-2 Mass Communication Research Centre (MCRC)

2-2-1 Jamia Millia Islamia University and the MCRC

(1) Jamia Millia Islamia University

The Jamia Millia Islamia University is one of the ten central universities in India including such universities as Delhi University and Nehru University. If all the various schools attached to it were included, from a nursery to a high school, the current scale of enrollment of the entire University would be about 7,000 students. It has a huge campus in the south of Delhi.

The University was originally established in response to the call made to create a network of national educational organizations independent from the government which was under the control of foreigners in those times. That call had been made originally by Mahatma Gandhi in 1920. Among the founding members of the management of the University was Dr. Zakir Hassan, a well-known educator of those times, who became the President of India after the nation achieved independence.

Before the nation's independence, the University experienced a period of extreme financial difficulties. However, after independence, from 1963 the University began receiving financial assistance from the government and recently established itself as a university. In the Jamia Millia Islamia University Act of 1988, too, the University is specifically defined as one of the central universities.

Today, the Jamia Millia Islamia University as an institution offering university courses and a graduate course, has a number of different fields including Humanities and Languages, Social Sciences, Natural Science, Education, Engineering, Fine Art, Law and Mass Communication. Furthermore, as a high-level educational institution for specialists, the University has the Mass Communication Research Centre (MCRC), a library and an information science research institute. The number of members of the university staff is 1,051 and the total number of students at present is 4,330 (1989).

As mentioned above, the University, besides being one of the major universities of India, is energetically tackling, in particular, various social-service projects and studies in adult education. It also is vigorously promoting research in technologies, arts and mass communications and, at the same time, is engaged in consistent education from nursery to high school.

(2) Objectives and Roles of MCRC

The MCRC was started in 1983, with cooperation given by Canada, as one of the institutions of the Jamia Millia Islamia University in order to study mass communication. At present, many graduates who come from not only Jamia Millia Islamia University but also from all over India apply for entrance into MCRC. The objectives and roles of the MCRC are defined as follows:

- ① To educate the students on both the theoretical and practical aspects of Radio, Audio-Visual, TV and Film Production by means of the 2-year master's course on Mass Communication.
- ② To Produce educational enrichment programmes for the regular UGC broadcasts using the INSAT satellite.
- ③ To make effective use of such traditional media as theatrical plays and puppet shows.
- ④ To conduct studies on the formats of software for radio, TV, film and audio-visual programmes.
- ⑤ To conduct researches on the programme formats of radio, audio-visual, TV and film audience and undertake research in methodologies of such feedback.
- ⑥ To cooperate in the production of full-scale audio-visual programmes and tape-slide shows for the public network, development ministries and non-government organizations, by making effective use of the MCRC's programme-producing ability.
- ⑦ To cooperate as much as possible with other ministries and government agencies, various organizations concerned and independent organizations in the training of programme production personnel.
- ⑧ To conduct researches in other domains of mass communications.

The MCRC plays the central role in the educational broadcasting activities of the UGC. While itself producing programmes as one of the main media centres located in four cities across the country (there are, besides the MCRC, 3 Educational Media Research Centres in Hyderabad, Ahmedbad and Poona), the MCRC assumes the responsibility for pre-broadcast packaging or coordination of the programmes produced by the Audio Visual Research Centres attached to 5 state universities. In addition, the MCRC cooperates with various ministries and public organizations in their developmental activities and is also engaged in the production of

programmes designed to promote such developmental activities. However, because of the inadequacy of programme production equipment at the MCRC both in quality and quantity, the MCRC at present is hardly in a position to fulfill its responsibilities in response to the growing demands made on it. Hence, the improvement and expansion of the existing facilities and equipment at the MCRC are now problems that need to be tackled urgently.

(3) Characteristics of the MCRC

The main characteristics of the MCRC are as follows:

- ① Because its students are those who have been selected from among the graduates of universities across the country, surviving a ratio of competition some 30 to 1, they are of extremely high calibre.
- ② The students, in addition to undergoing practical training, are required to take part in actual programme production work in mid-course of their attendance at the master's course and many of the programmes thus produced by the students are broadcast nationwide on DDI's network as UGC's educational programmes.
- ③ The MCRC, as the only publicly run programme production centre in Delhi, the nation's capital, produces programmes on behalf of government agencies and public organizations and, at the same time, offers various kinds of services including giving guidances and advice on request.
- ④ The graduates of the MCRC are in great demand from various quarters; the broadcasting stations of DDI and the AIR, the IGNOU, ministries and other government agencies, public organizations, private firms and film companies.

The MCRC was first established in 1983 within the Jamia Millia Islamia University. At the beginning, assistance was extended by York University of Canada which provided a set of programme production facilities and sent a number of experts. At the start, 2 persons, a professor and a lecturer specializing in TV and film, were sent from Canada to give guidance to the MCRC staff. After that, an engineer was sent from Canada as a long-term expert to assist in the work concerning the development of programme production techniques and maintenance and management of equipment and installations.

However, the cooperation given by Canada was terminated in 1987 and the expert returned to his country. The programme production equipment provided by Canada as mentioned above were, from the beginning, of a small-scale system and, besides, superannuation has already advanced considerably, making it difficult for them to respond effectively to the growing demands made on them. Hence, the request has been made to the Japanese government for assistance, based on the judgment that full-scale measures are required to be taken to improve and expand the equipment of the MCRC.

2-2-2 Organization, Management and Personnel Composition of the MCRC

(1) Organization and Management of the MCRC

In the Jamia Millia Islamia Act of 1988 which officially defines the Jamia Millia Islamia University, the MCRC is guaranteed of its independence in conducting activities and research which are in conformity with the objectives of the University.

The composition of the members of the steering committee as the highest decision-making organ of the MCRC is provided for by the above-mentioned Act. Accordingly, the steering committee at present is composed of those related with the University and the distinguished persons concerned selected from the mass communication circles. The current chairman of the steering committee is the vice chancellor of the Jamia Millia Islamia University and the 13 members of the committee include not only those related with the university but also chairmen of the DDI, the AIR, the UGC and the film industry. Thus, the composition of the highest decision-making organ of the MCRC clearly expresses the character of the MCRC as the central research and production centre for mass communication in India. The current organizational chart of the MCRC is shown in Fig. 2-2-1.

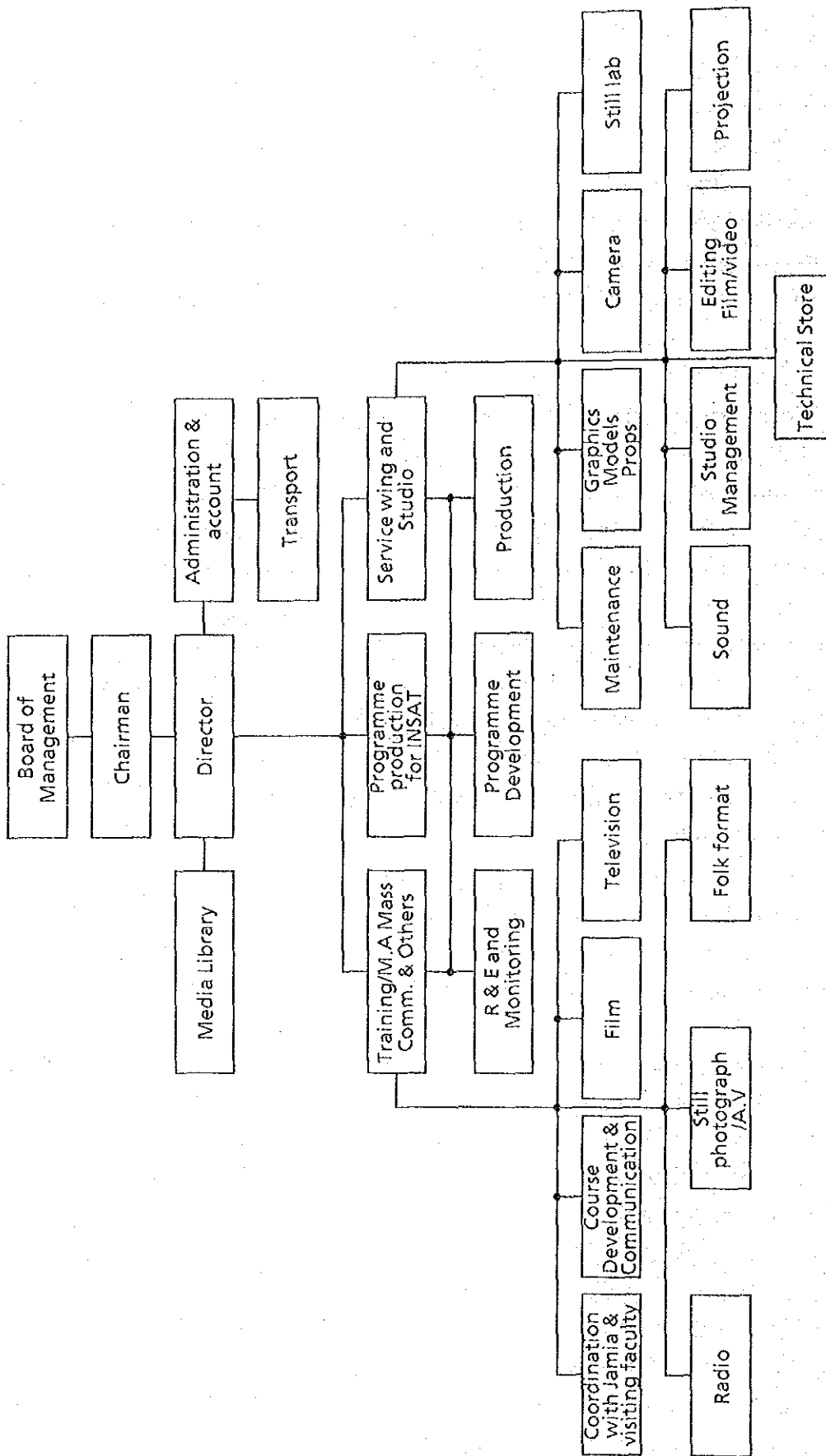


Fig. 2-2-1 Organization Chart of MCRC

The MCRC is run with the annual budget allocated by the UGC at the start of each fiscal year. The budget allocated to the MCRC is treated separately from the budget allocated to the Jamia Millia Islamia University. Table 2-2-1 shows the transition of the MCRC's budget during the last four years. As can be seen from this table, the amount has been increased each year. The budget allocation for 1990 shows an increase of over 50% as compared with that for the preceding fiscal year, 1989. This is because the office and other functions of the newly constructed MCRC building, excepting its studios, have begun to be put into full operation as from the current fiscal year, with the result that the expenditures in personnel expenses and recurring expenses, in particular, have increased substantially.

First, in the aspect of personnel expenses, the increase in expenditure has been explained as being due to the increase in the number of staff members in 1990/91 by 14 from 82 in 1989/90 to a total of 96, and also due to the increase in the expenses required for work activities following the increase in the volume of the programmes to be produced.

Second, the increase in the amount of recurring expenses are due to such circumstances as, the increase in the use of electricity and in the lease of telephone circuits following the start of operation of the new building. There also is the increase in the amounts of expenditure in relation to programme production, such as, changing the procurement of films for training use from 8mm to 16mm, increasing the purchase of videocassette tapes and of spare parts for the superannuated programme production facilities. However, it can be judged that, despite the stern reality of the restricted national finance of India, the MCRC has been operated efficiently and has steadily been achieving substantial results, thanks to the enthusiasm and efforts of the staff, coupled with the cooperation given by the University and other organizations concerned.

Table 2-2-1 Transition of the Scale of the MCRC's Budget during the Last 4 Years

	1987/88	1988/89	1989/90	1990/91
INCOME:				
	Rp	Rp	Rp	Rp
1. Grants from University Grants Commission	3,579,060	4,278,300	4,771,940	7,200,000
2. Receipts other than grants	20,940	21,700	28,060	200,000
Total	3,600,000	4,300,000	4,800,000	7,400,000
EXPENDITURE:				(Planned)
1. Salaries & Allowances	1,600,000	2,200,000	2,400,000	3,200,000
2. Recurring Expenses	1,000,000	1,000,000	1,200,000	3,000,000
3. Non-Recurring Expenses	1,000,000	1,100,000	1,200,000	1,200,000
Total	3,600,000	4,300,000	4,800,000	7,400,000

(2) Personnel Composition of the MCRC

The MCRC at present is composed of a staff of 96 including the Director of the Centre as the head of the staff. There are 3 people handling the work of the Chairman's Office, 23 in charge of Administration and Accounts Unit, 4 in charge of the Library, 15 in charge of Teaching, 24 handling the work of Programme production and 27 in charge of Engineering Wing. The transition in the number of personnel of the MCRC during the last four years is shown in Table 2-2-2. And the present composition of the MCRC's personnel is shown in Table 2-2-3.

Meanwhile, in order to promote this Project to expand its programme production equipment, the MCRC has already been making steady preparations by inviting a former DDI engineer as the officer responsible for the technical aspects of the Project.

Table 2-2-2 Transition in the Number of MCRC's Personnel during the Last 4 Years

Sector	1987	1988	1989	1990
Office of the Chairman	3 persons	3 persons	3 persons	3 persons
Administrative & Accounts Unit	22	22	22	23
Library	3	3	4	4
Teaching Wing	8	10	10	15
Production Wing	19	21	21	24
Engineering Wing	20	21	22	27
Total	75 persons	80 persons	82 persons	96 persons

Table 2-2-3 Present Composition of the MCRC's Personnel

S. No.	Name of the post	No. of posts
Office of the Chairman		
1.	Director	1
2.	Stenographer	1
3.	Jr. Clerk / Typist	1
Administration and Accounts Unit		
4.	Administrative Officer	1
5.	Accountant	1
6.	Receptionist	1
7.	Care Taker	1
8.	Senior Clerk	2
9.	Stenographer	1
10.	Junior Clerk	3
11.	Gest. Operator	1
12.	Driver	3
13.	Helper	2
14.	Security Guard	4
15.	Safaiwala	3
Library		
16.	Media Librarian	1
17.	Assistant	1
18.	Junior Clerk / Typist	1
19.	Attendant	1
Teaching Wing		
20.	Professor	2
21.	Reader	3
22.	Lecturer	5
23.	Scientist	1
24.	P. A.	2
25.	Junior Clerk / Typist	2
Production Wing		
26.	Cameraman (Grade I)	2
27.	Cameraman (Grade II)	4

S. No.	Name of the post	No. of posts
28.	Producer (TV)	2
29.	Production Assistant	2
30.	Production Manager	1
31.	Sound Recordist	1
32.	Electrician	1
33.	Light Boy	4
34.	Floor Manager	1
35.	Carpenter	1
36.	Lab Assistant (Photo-lab)	1
37.	Unit Manager	1
38.	Film Projectionist	1
39.	Helper	2
Engineering Wing		
40.	Engineer-in-Charge	1
41.	Maintenance Engineer	1
42.	Assistant Engineer	6
43.	Senior Engineer Assistant	3
44.	Technician	4
45.	Helper	2
46.	P. A.	1
47.	Junior Clerk	1
48.	Store Officer	1
49.	Typist	1
50.	Helper	2
51.	Producer (Radio)	1
52.	Production Assistant (Radio)	1
53.	Assistant Engineer (Radio)	1
54.	Technical Assistant (Radio)	1
Total Posts		96

2-2-3 Present Status of Education and Training at the MCRC

As can be seen from the fact that a large number of applicants come to the MCRC from universities across the country, the MCRC today is not just an organ of the Jamia Millia Islamia University but is actually India's sole public research and programme production organization concerned with broadcasting. Thus, the MCRC's significance in Indian society is extremely high.

Up to now, the MCRC has made it a practice to accept about 30 students each fiscal year and to educate them by having them complete a 2-year master's course in mass communication, which includes training in the production of programmes for radio, TV, films and audio-visual education. As for the study subjects, there are a total of 10 compulsory subjects; 7 taught in the 1st year and 3 in the 2nd year.

The number of the new students and that of the graduates during the last 5 years are shown in Table 2-2-4, while a list of the current study subjects is given in Table 2-2-5. The Study Timetable is shown in Table 2-2-6.

However, at present MCRC has only one temporary studio and its programme production facilities are not only of poor quality but also inadequate. In view of the situation, it is judged that it is practically impossible to conduct education and training on a scale larger than that at present. Moreover, given the steady sophistication and diversification of programme production methods in recent years, a period of two years cannot be considered sufficient for the training of personnel. Besides, further extension of the period of the master's course to three years would be no problem from the point of view of India's school system. Hence, MCRC has been expressing its desire to extend the period of its master's course to three years so as to further enhance both the theoretical and practical aspects of the education it provides. At present, MCRC is educating producers who are concerned with the software aspect of programme production, but is currently examining the possibility of from now on training also engineers to take charge of the hardware (technical) aspects of programme production, such as those to handle cameras, lighting, audio and post-production facilities.

Table 2-2-4 Transition in Number of the MCRC's New Students and Graduates during the Last 5 Years

	1985	1986	1987	1988	1989
New Students	19	25	26	28	34
Graduates	15	24	15	22	23

(The new students graduate two years later. For example, those entering MCRC in 1987 graduated in 1989.)

Table 2-2-5 Present Study Subjects in the 2-year Master's Course at the MCRC

<u>1st Year</u>	
Subject - 1	Communication Theory (research and evaluation)
Subject - 2	Theory of Graphics
Subject - 3	Scriptwriting
Subject - 4	Media Sounds
Subject - 5	Traditional Art of Entertainment
Subject - 6	Production of Audio-visual Works
Subject - 7	Production of Radio Works
<u>2nd Year</u>	
Subject - 8	Production of TV Works
Subject - 9	Production of Film Works
Subject - 10	Critical Review of Works

As shown above, during the 1st year, the students are given lectures on such subjects as communication theory, theory of graphics, scriptwriting, sound media and traditional arts of entertainment. In addition, the students are given lectures and practical training in the production of audio-visual works (slides and audio tapes) and radio programmes.

In the 2nd year, the students are given lectures and practical training in TV programme and film production, and also learn about media evaluation as one of the study subjects.

The daily study hours during the 1st and the 2nd years are, in principle, four periods of classes and practical training, each period consisting of 90 minutes.

Table 2-2-6 Study Timetable for MCRC's Master's Course (2-year Course)

1st Year

	1st Period	2nd Period	3rd Period	4th Period
Mon.	Communication Theory	Audio Media	Communication Theory	Communication Theory
Tue.	Scriptwriting	Scriptwriting	Graphics Theory	Graphics Theory
Wed.	Traditional Arts of Entertainment	Traditional Arts of Entertainment	Graphics Theory	Graphics Theory
Thu.	Communication Theory	Radio Production	Traditional Arts of Entertainment	Graphics Theory
Fri.	Scriptwriting	Scriptwriting	Radio Production	Production of Audio-visual Works
Sat.	Lecture by an outside lecturer	Lecture by an outside lecturer		

2nd Year

	1st Period	2nd Period	3rd Period	4th Period
Mon.	Film Production	Film Production	Film Production	Film Production
Tue.	Film Production	Film Production	Film Production	Film Production
Wed.	Film Production	Film Production	Media Evaluation	Media Evaluation
Thu.	TV Production	TV Production	TV Production	TV Production
Fri.	TV Production	TV Production	TV Production	TV Production
Sat.	Lecture by an outside lecturer	Lecture by an outside lecturer	TV Production	TV Production

2-2-4 Present Status of Programme Production at the MCRC

The number of programmes and other works produced by MCRC has a definite trend of yearly increase. In 1990/91, the total has been 280, of which video works totalling 210 have accounted for about 75%, followed by AV slides, radio works and film works. Among the video works are the programmes produced at the request of UGC, government agencies and universities, as well as the programmes produced in the course of practical training given to the students. The number of programmes produced at the request of UGC has been increasing every year. In 1990, it was 210, which accounted for about 75% of the programmes produced by MCRC during that year. This would be more than 17 a month on average, or over 4 a week. The numbers of works produced by MCRC during the last five years are shown in Table 2-2-7 and those produced at UGC's request in Table 2-2-8.

As to the categories of contents of the video works produced by the MCRC, the data for 1989/90 show that about a third are those related to social science, followed by science & technology, education, fine arts, sports and language/literature, in that order. Table 2-2-9 shows the categories of contents of the video works produced during the last 3 years.

In producing these programmes, the MCRC is dealing with the requests made to it in a flexible manner, depending on the nature of the plans or the content of the programme being produced. As a result, some programmes are produced by the MCRC staff alone, while others are produced with assistance given by outside producers or cameramen from broadcasting stations, production firms or other organizations.

There are 18 full-time staff including a producer for video works in MCRC.

Such video works as mentioned above are at present produced in a temporary studio which has been set up by remodelling a lounge in the University's guest house. The current condition of how this temporary TV studio is used is shown in Table 2-2-10; in fact, the annual usage rate of this studio in recent years has been an average of 170%. The 70% in excess of the capacity has been handled by night work or work done on holidays. As a result, the length of the hours of use has been extended, causing occasional equipment failures.

The reason why the TV programme production facilities are put to such excessive use is that there has been a steady increase in the volume of

programmes that need to be produced at UGC's request and, moreover, that they are used by students in producing their final programmes for the graduation test. Especially during the period of three months from March to May when the students are engaged in the production of final programmes for the graduation test, the studio is used frequently during the night hours and even during holidays. On the other hand, as for the contents of the programmes produced, the JICA study team, on monitoring some of them, noticed that they were on the whole monotonous and the presentation effects were not of a high standard. That is probably due to a number of reasons, such as that because of the restricted equipment and facilities, there is a limit to the production capability. Consequently, in terms of volume, it is practically impossible for MCRC to respond to UGC's request to increase the number of programmes produced each month by five. And in the aspect of programme quality, too, for the same reason, the facilities cannot be considered adequate in various respects, such as video effects, studio lighting and VTR picture quality. Thus, as outlined above, the programme production facilities currently installed at MCRC, being centred on equipment for the production of audio-visual materials, are not quite adequate, neither in functions nor durability, to serve as facilities for the production of programmes to be broadcast daily on a nationwide network.

Table 2-2-7 Numbers of Works Produced by the MCRC during the Last 5 Years

	1986/87	1987/88	1988/89	1989/90	1990/91 (Planned)
Video works	117	156	120	131	210
Film works	6	7	9	9	10
AV slide works	23	21	24	28	30
Radio works	8	12	27	33	30
Total	154	196	180	201	280

Table 2-2-8 Numbers of Programmes Produced at UGC's Request during the Last 5 Years

1986/87	1987/88	1988/89	1989/90	1990/91
105	120	120	135	210

Table 2-2-9 Video Works Produced by MCRC during the Last 3 Years, by Category of Contents

	1987/88	1988/89	1989/90
Science and technology	32.1%	26.7%	21.4%
Social science	25.6%	29.1%	37.4%
Language and literature	13.5%	15.8%	9.9%
Fine arts & sports	2.5%	9.2%	13.0%
Education	26.3%	19.2%	18.3%

Table 2-2-10 How the TV Studio has been Used

	1986/87	1987/88	1988/89	1989/90
Usage ratio	166%	156%	173%	169%
(Breakdown)				
For UGC programme production	94%	89%	94%	98%
For production by students	62%	60%	70%	65%
For production of works for outside users	10%	7%	9%	6%

(Calculated on the basis of 100% = 1,824 hours, which is the total of work hours from 8:00 to 17:00 every day, except nighttime and holidays, during one year)

2-2-5 Existing Facilities of the MCRC

The main facilities currently possessed by the MCRC are as follows:

- Temporary TV studio (about 50m²) 1 set
3 cameras, a simple video console, an audio console, a 3/4" VTR (low band), a monitor, etc.
- Editing equipment 2 sets
A 3/4" VTR (low band) and a simple editor
- Telecine 1 set
A camera, a 16mm film projector, a 35mm slide projector
- Film equipment
3 cameras, 2 editors, a 16mm film sound converter
- Outdoor coverage equipment 3 sets
A camera and a 3/4" VTR (low band)
- Still photography equipment Several sets
A camera and a developer

The TV studio is a facility set up by remodelling a lounge of a guest house. Its ceiling is low and this has been restricting programme production to a considerable extent. As to other equipment, too, seven years have already elapsed since they were first installed. They are generally of low grade and are rather obsolete. Functionally, the equipment are all simple and are quite weak in durability. Yet, they have been maintained quite well, indicating the efforts made by the MCRC in its maintenance work. The existing facilities are scheduled to be used as standby facilities even after the execution of this Project.

2-2-6 Relations between the MCRC and Other Broadcast-related Organizations

The MCRC has the following relationships with the DDI, the AIR and the Indira Gandhi National Open University (IGNOU).

The DDI, in addition to broadcasting the UGC educational programmes produced by the MCRC through its nationwide network, sometimes broadcasts programmes selected from among the programmes produced by the MCRC that are considered as being socially and economically beneficial. The DDI produces cultural programmes but does not produce educational programmes.

MCRC and IGNOU produce programmes respectively according to their own curriculums.

With cooperation given by the DDI, the AIR and the IGNOU, the MCRC conducts examinations to select new staff members for employment from

among the applicants. And sometimes the MCRC staff members are seen assisting the other three organizations in their employment examinations. The MCRC also occasionally asks for the help of the other three organizations, such as inviting their specialists as lecturers for its classes or asking them to send officers to act as examiners at the end of a school term. The MCRC's lecturers and engineering staff sometimes are given suggestions and advice by the specialist staff of the DDI or the AIR.

Furthermore, some of the graduates of the MCRC find employment with one or the other of the three public organizations. Thus, the MCRC plays a central role as a valuable human resources development centre for the broadcast-related circles in India.

2-2-7 Expansion Plans of the MCRC

When this Project to provide programme production equipment to the MCRC's new building, which is already completed, is brought to reality, the MCRC, in order to make maximum use of the new facilities, plans to carry out the following expansion plans.

(1) Expansion Plan for Education and Training

In an effort to respond fully to the requests from India's mass communication media to assist in the training of programme producers both quantitatively and qualitatively, MCRC plans to extend the period of its master's course from the present 2 years to 3 years and, at the same time, to increase the number of students for each year from the present 30 to 60.

When the master's course is extended to a 3-year course, MCRC plans to make all the subjects of the 1st and 2nd years as they are at present basically compulsory. And, as for the 3rd year course to be newly opened, MCRC has the plan of making it a course in which more specialized training will be given to foster programme producers by setting up four sub-courses as shown in Table 2-2-11 below, viz., TV Production, Radio Production, Film Production and Research Courses.

Table 2-2-11 Study Subjects Planned for the 3rd Year Class of the Master's Course (3 years)

TV Production Course	Subject - 1 Subject - 2 Subject - 3	TV Production TV Editing TV Camera	35 persons
Radio Production Course	Subject	Radio Production	10 persons
Film Production Course	Subject - 1 Subject - 2	Film Direction Film Editing	10 persons
Research Course	Subject	Communication Research	5 persons
Total:			60 persons

Apart from the above, MCRC is exploring the possibility of establishing an Engineering Course (1-year course; 4-8 persons) so that, taking advantage of the equipment and installations being provided hereafter, engineers to engage in programme production may be trained from among the graduates of the electronic engineering faculty of the Jamia Millia Islamia University.

(2) Expansion Plan for Programme Production

In response to the requests from UGC to double the volume of educational programmes produced for UGC's broadcasts and to those from government organs and others for an increase in the production of programmes for use in promoting social development, MCRC plans to increase the number of TV and radio programmes it produces as shown in Table 2-2-12.

Table 2-2-12 MCRC's Expansion Plan for the Production of Programmes (annual)

	Expansion Plan		Present Status	
	Number of Programmes	Facilities	Number of Programmes	Facilities
TV Production	630	2 studios	250	1 temporary studio
Radio Production	280	1 studio	30	No studio facility

Under the above-mentioned expansion plan, MCRC aims at reinforcing TV production in particular and is exploring the possibility of expanding and improving the practical training of the students and doubling the production of programmes for UGC broadcasts. Table 2-2-13 given below shows the contents of the expansion plan for the production of TV and radio programmes. The plan includes MCRC's intention of producing full-scale special works that are unique to MCRC, taking up social development themes including agricultural problems and anti-pollution measures.

Furthermore, MCRC plans to respond effectively to UGC's request for doubling the production of programme materials. These programme materials are scheduled to be dubbed and distributed to the universities in various regions besides being used for broadcast.

Meanwhile, following the expansion of the master's course to a 3-year course, the practical training hours for the students are scheduled to be increased accordingly and the number of their works, too, are due to be increased six-fold.

Table 2-2-13 Contents of Expansion Plans for the Production of TV and Radio Programmes by MCRC

	TV		Radio	
	Expansion Plan	Present Status (1990/91)	Expansion Plan	Present Status (1990/91)
Programme Production for Broadcast Use				
• UGC programmes	120	60	60	—
• Programme materials (at UGC's request)	300	150	—	—
• Special MCRC programmes	10	—	—	—
• Production at the request of outside organizations	20	10	—	—
Student's Practical Training				
• 1st – Year Practical Training	—	—	120	30
• 2nd – Year Practical Training	60	30	—	—
• 3rd – Year Practical Training	120	—	100	—
Total:	630	250	280	30

(The expansion plan for the production of programmes for UGC has been drawn up in response to UGC's request to double the production.)

(3) Plan for Increase of the Staff

Regarding its intention to increase staff under this expansion plan, MCRC has been examining the possibility of increasing the staffs in the Production Wing, the Teaching Wing and the Administration/Accounts Units, especially of increasing the number of personnel in the Engineering Wing. According to MCRC's plan, the total number of staff members is planned to be increased in stages from the present 96 (Table 2-2-3) to 110 under a 2-year plan, as follows:

Engineering Wing	49 persons
Production Wing	15 persons
Teaching Wing	3 persons
Administration and Accounts Unit	34 persons
Management of the New Studio Building	9 persons

Total	110 persons
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(4) Expansion Plan for the Budget

When this Project is completed, the training and programme production facilities will have been expanded and, as a result, MCRC's overall expenditure will increase substantially in various respects, such as personnel expenses, maintenance and management charges and operational expenses.

As a result of the implementation of this Project, MCRC's budget will need to be at least doubled in amount.

At present, MCRC, in cooperation with the University authorities, is already in the process of negotiating concretely with the Ministry of Human Resources, UGC, the Ministry of Finance and other organizations concerned regarding the expansion plans and the expenses required. The Ministry of Human Resources, in particular, has pointed out the need of taking necessary measures to provide an adequate budget to cope with the situation after the implementation of the Project. Hitherto, the budgets allocated to MCRC have been increased steadily. Especially for 1990, the budget has been increased by 50% of the amount allocated in the preceding fiscal year. In view of such past records, there is a favourable outlook at MCRC for the realization of a further increase in the amount of the budget to be allocated to it from now on.

Incidentally, as regards the remodelling expense of 250,000 rupees which is to be borne by the Indian side, necessary budgetary measures have already been taken by the Government of India.

2-3 Outline of the Request

2-3-1 Process Leading to the Request

The MCRC's existing equipment are not only superannuated but also quantitatively inadequate. As a result, MCRC has been greatly obstructed in its effort to foster high-calibre personnel capable of dealing with modern mass media techniques which are becoming increasingly sophisticated (the type of personnel for whom demand has been increasing sharply from mass communication circles), and also hindered in its effort to make qualitative and quantitative improvements in its production of an ever-increasing number of educational programmes. Hence, the Indian government decided to expand the facilities of the MCRC and has already completed the construction of the new studio building. However, the Indian government has been facing difficulties in the installation of the programme production equipment which are required to be provided in the new facilities owing to financial reasons. In view of the situation as described above, the Indian government drew up its plans to reinforce equipment for use in the training of personnel and in programme production and requested Japan to provide grant aid assistance.

It was in response to that request from the Indian government that the Basic Design Study was conducted by JICA in July 1990.

2-3-2 Contents of the Request

A request with the following contents has been made for the provision of equipment for installation in the MCRC's new studio building for training use and for programme production:

1) Video Programme Production Studio - 1

Colour camera system, Caption scanner, Video typewriter, Video production switcher system, Audio production equipment, Videocassette recorder system, Monitoring equipment, Studio communication equipment, Lighting equipment, etc.

2) Video Programme Production Studio - 2

Colour camera system, Caption scanner, Video typewriter, Video production switcher system, Audio production equipment, Videocassette recorder system, Monitoring equipment, Studio communication equipment, Lighting equipment, etc.

- 3) Audio Production & Dubbing Studio
Audio production equipment, Dubbing equipment, Monitoring equipment, Videocassette recorder, etc.
- 4) Post-production Studio
Videocassette recorders, Editing system, Video production equipment, Telecine system, Audio production equipment, Monitoring equipment, Control console
- 5) Master Control Equipment
Synchronizing signal/test signal generator, Standard clock system, Inter-room communication equipment, Signal distribution system, Videotape duplicating system
- 6) Editing Equipment
Single-step editing system
- 7) Outdoor Coverage Equipment
Video camera, Audio-recording equipment, Monitoring equipment, Lighting equipment, Carrier
- 8) Still-photography Equipment
Camera, Projector, Development equipment
- 9) Presentation Equipment
Video projector
- 10) Power-source Equipment
Receiving power board, Distribution board, Automatic voltage regulator, Insulating transformer
- 11) Measuring instruments, Tools
- 12) Spare parts
- 13) Installation materials

CHAPTER 3 Outline of the Project

CHAPTER 3 Outline of the Project

3-1 Objective

In India, there has been increasing demand from the rapidly growing mass communication media for the fostering of human resources and also from educational circles for an increase in the supply of educational programmes. The objectives of this Project, therefore, are to expand the personnel training functions and the programme production capacity of the MCRC of the Jamia Millia Islamia University through the provision of equipment for use in the training of broadcasting personnel and programme production to the new studio building which has already been completed by Indian side.

3-2 Study and Examination on the Request

3-2-1 Examination of the Appropriateness and Essentiality of the Project

In India, the film industry is traditionally prosperous. In addition, radio already covers 95% of the total population, while TV, as a result of the launching of the INSAT satellite, has spectacularly expanded its broadcasting network and has come to cover 77% of the nation's total population. Thus, the mass communication media in India have been expanding by leaps and bounds in recent years, with the result that there has been a growing demand for a large number of talented personnel. The AIR and the DDI have increased their work force by a total of 8,100 staff members during the last three years and they further plan to carry out an increase of about 20,000 during the period of the 8th 5-Year National Development Plan. Consequently, the fostering of capable human resources has now become an urgent problem that needs to be tackled in the mass communication media. However, in India today the people's literacy rate is still inadequate at 43.5% and, consequently, the print media including newspapers have not been effective enough as a means of education for a number of reasons, such as quantitative inadequacy. Hence, as a means to supplement the print media, broadcasting and education using audio-visual teaching materials are considered to play an extremely important role.

In India today there are 179 universities and 6,040 colleges, of which ten are central universities supported by the federal government.

The Jamia Millia Islamia University is one of the ten central universities and its status as a university is quite high.

The MCRC, which belongs to the Jamia Millia Islamia University, is India's only research institute specializing in mass communication. The MCRC educates and trains high-calibre personnel to engage in the work of mass communications, particularly radio and TV broadcasting, and, at the same time, produces educational programmes for use in TV, radio and film. The personnel trained at MCRC are playing important roles in the world of mass communication, such as DDI, AIR and IGNOU. As to the production of educational programmes, the work is handled by similar production centres set up at 10 locations across the country. MCRC assumes the central position among such production centres. All the programmes produced by the production centres are sent to MCRC and, after being edited, are broadcast by DDI as educational TV programmes.

However, for the production of TV programmes, MCRC's present facility consists only of one temporary TV studio which is already overused, its usage rate being 170%. Its installations, too, are superannuated. As a result, MCRC is currently in no position to respond effectively to the steadily growing demand for the fostering of personnel who are capable of coping with the rapid sophistication of techniques and technologies of the mass communication media. Nor is MCRC in a position to respond fully to the request from UGC to produce the required number of TV programmes.

In the face of the growing needs of the mass communication media for competent human resources as outlined above, MCRC planned to construct a new studio building in an effort to respond effectively to the ever-increasing number of applicants for enrollment (exceeding 800 each year) and to the rising demand for a further increase in the production of educational programmes and their qualitative improvement. A detailed expansion plan in connection with this Project has been drawn up and has been approved by UGC and the Ministry of Human Resources, although some minor reviewing will have to be done prior to implementation. And in accordance with that plan, a new studio building (the building and the power source and air conditioning equipment only) has already been completed to eventually house two TV studios and one radio studio. When the equipment are installed under this Project, two well-equipped studios would be completed and, as a result, the following expansion would be achieved.

The number of students to be enrolled each year would be increased from 30 to 60 and, by extending the training period to three years, the total number of students in any given year would be trebled from the present 60 to 180.

The total number of educational TV programmes currently produced by MCRC is 250, comprising 210 for UGC, 10 for outside organizations and 30 produced by the students in the course of their practical training in programme production. MCRC's plan after completion of this Project calls for production of a total of 630 programmes (a bit more than double the present figure) comprising 430 for UGC, 20 for outside organizations and 180 to be produced by the students in the course of their practical training in programme production. The renewal and improvement of the installations to be brought about the Project will also enable MCRC to further enhance the quality of the programmes it produces.

As mentioned above, implementation of this Project can be considered as fully justified, in view of such circumstances as the position MCRC occupies in India's mass communication and education circles, the way MCRC has been tackling the work to realize the Project and the high level of contribution which this Project can be expected to make when it is carried out.

3-2-2 Examination of the Execution and Operational Plans

The aim of this Project is to reinforce the two functions that the MCRC is required to perform by providing the MCRC's new studio building with the necessary programme production equipment. The two functions are the human resources training function in the field of broadcasting and the radio and TV programme production function.

Therefore, in order to ensure that the above-mentioned functions are reinforced after the execution of this Project, there is the need of a substantial increase in the number of staff members of the MCRC to cope with various requirements as follows, in addition to maintaining the current staff of 96:

- ① Programme production and engineering personnel to handle the work in the new studio building which is to become fully operational under this Project.
- ② The additional lecturers and office staff who become necessary as a result of the 2-year master's course being extended to 3 years

and also of the number of annual student enrollment being increased from the current 30 to 60.

- ③ Administration and maintenance personnel for the new studio building.

As regards the above-mentioned increase in the number of staff members, the MCRC plan is as follows:

• Engineering staff	49
• Production staff	15
• Lecturers	3
• Administration/Accounts staff	34
• Management staff for the new studio building	9

Total: 110

Under this Project, the number of engineering staff members will be just about trebled and that of the programme-production staff members just about doubled, as compared with the present figures. In addition, under this Project such facilities as two TV studios and one radio studio will be provided and this will necessitate about three times as many personnel as at present. In order to cope with the plan of doubling the number of programmes to be produced, there will be the need of just about doubling the number of personnel. From such a point of view, the above-mentioned personnel assignment plan can be judged as appropriate.

In order to carry out this personnel assignment plan, the required increase in personnel expenses will amount to about 3,225,000 rupees a year. (See 3-3-5.)

MCRC's budget is allocated annually from UGC and the transition of its annual allocations during recent years is as shown in Table 2-2-1.

The personnel expenses budgeted for 1990 are 3,200,000 rupees/year, so if the estimated increase of 3,225,000 rupees resulting from this Project were added, the total personnel expenses would be doubled to about 6,425,000 rupees/year.

However, it can be considered that there will be no problems neither in the personnel expenses nor in terms of the operational funds that are available to MCRC, if the five factors given below are taken into account and also in view of the fact that spectacular annual growth has been recorded in the budget allocated from UGC to MCRC and the fact that the

foundation of the Jamia Millia Islamia University as the parent body of MCRC remains firm. The five factors that justify the above-mentioned judgment are: ① The budget plan proper is controlled by UGC and MCRC's expansion itself is one that has been proposed by UGC; ② the expenses for the construction of the new studio building were actually covered entirely by UGC's special budget (about 20 million rupees); ③ the amount of the budget allocated by UGC for 1990 represents an increase of about 50% over that for 1989, taking into account the expected increase in the amount of personnel expenses; ④ the budget of UGC itself is about 3.5 billion rupees (1989) and therefore the increase in MCRC's personnel expenses resulting from the implementation of this Project would account for only 0.1% of UGC's budget; and ⑤ although an increase of 110 staff members would mean MCRC just about doubling its total work force, the number is equivalent to only about 10% of the entire staff of the Jamia Millia Islamia University, which is 1,051.

Moreover, the Ministry of Human Resources, too, has referred to the need of taking necessary budgetary measures for MCRC after completion of this Project.

3-2-3 Examination of the Relations, Overlapping, etc., with Similar Projects and Other Assistance Projects

(1) Indira Gandhi National Open University (IGNOU)

As a similar project, there is the case of the assistance, by Japanese government grant aid, in the provision of equipment carried out last fiscal year for the Indira Gandhi National Open University (IGNOU). This assistance given to the IGNOU was conducted in the form of the provision of such broadcast-related equipment as the post-production equipment, editing equipment and outdoor coverage equipment. The present Project includes the provision of similar types of equipment. However, it must be noted that, in day-to-day activities, it is practically impossible for the MCRC and the IGNOU to share the same equipment. One major reason that makes such sharing of equipment difficult is the difference in the organizational setup between the two. Also, as a matter of fact, there seems to be little likelihood of the IGNOU being in a position to make its equipment available to other organizations, in view of the fact that the IGNOU is supposed to conduct programme production strictly in accordance with the curriculum of the IGNOU. Therefore, it is utterly unthinkable that the MCRC would be able to use the IGNOU's equipment when the former

really needs to use them. Furthermore, from the MCRC's point of view, the contents of its request represent the establishing of a large-scale self-sustaining system and therefore it would be a great obstruction to its operation if it were required to go out to another organization to borrow items of equipment every time the need arises. Moreover, the MCRC has the major task of conducting the training of personnel as well as producing programmes, and this, too, is another factor that makes it impossible for the MCRC to depend on any other organization for the use of equipment, in view of the need of adjusting the schedule of use of the equipment for training or for programme production and also of sharing the responsibility for the maintenance of equipment. Moreover, MCRC has the major task of conducting the training of personnel as well as producing programmes, and in order for MCRC to carry out its dual tasks efficiently and fully, it is most essential that all the programme-production facilities are installed within MCRC's own studios.

(2) Cooperation from Canada

The MCRC, as mentioned earlier, was started with assistance given in 1983 by York University of Canada. That was a project carried out under a cooperation agreement between the two universities, in which a set of film and video programme production facilities was provided and a number of experts were sent from Canada to assist in the MCRC's activities. At first, two professors for TV and film were sent from Canada to give guidance, followed by an engineer who was sent as a long-term expert to cooperate in the training of personnel in programme-production techniques and maintenance and management. That expert having gone home, Canada's assistance to the MCRC ended in 1987.

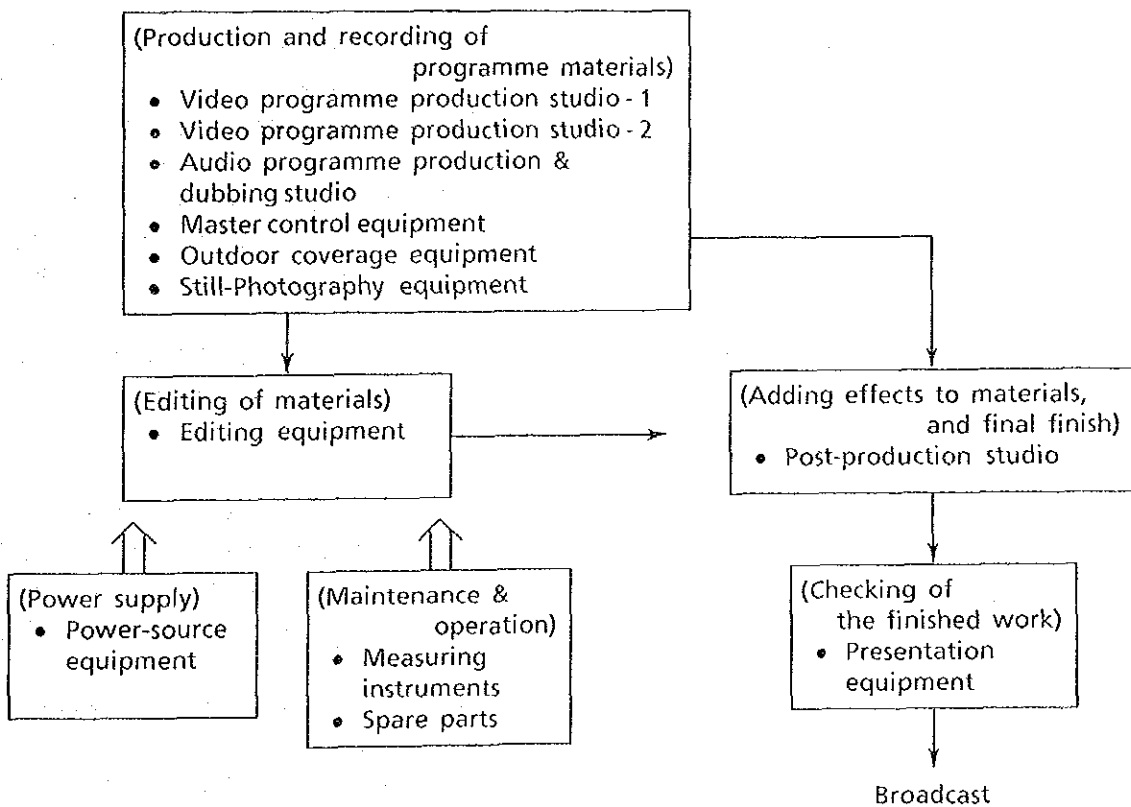
3-2-4 Examination of the Component Factors of the Project

The objective of this Project is to provide and install the necessary equipment in the studio building which has already been constructed by the Indian side. This new studio building is to play a dual role; to be used for practical training of the MCRC's students and the production of educational programmes for the UGC. Based on such preconditions as mentioned above, the Project consists of the following component factors:

- (1) Video programme production studio - 1
- (2) Video programme production studio - 2
- (3) Audio programme production & dubbing studio

- (4) Post-production studio
- (5) Master control room
- (6) Editing equipment
- (7) Outdoor coverage equipment
- (8) Still-photography equipment
- (9) Presentation equipment
- (10) Power-source equipment
- (11) Measuring instruments
- (12) Spare parts, etc.

The above-listed component elements, as indicated below, constitute as a whole an integral part of the system for video and audio programme production.



The major equipment and functions of these component factors are shown in Table 3-2-1.

Table 3-2-1 Outline of the Component Factors

Component	Major Equipment	Function
(1) Video programme production studio - 1	<ul style="list-style-type: none"> • Camera (studio type) • Caption Scanner • Character Generator • Video Production Equipment • Audio Production Equipment (16CH) • VCR • Monitors • Inter-Communication Equipment • Lighting Equipment 	<p>A studio to be used in giving practical training to students and in producing educational and cultural TV programmes. As its floor space is relatively large at about 150m², it can be used for production of such programmes as dramas, puppet shows, music, dances, scientific experiments, educational lectures and talk programmes.</p> <p>Taking into account the fact that this studio will be used for production of relatively large-scale programmes and for training in full-scale in-studio production of programmes, a studio-type camera with excellent operatability and stability will be adopted.</p> <p>Video production switcher will be equipped with a minimum necessary range of video-effect devices, such as chroma-key, wipe, mix and superimposition. For insertion of titles, diagrams and characters, a caption scanner and a character generator will also be installed.</p> <p>VTRs will be provided so that independent programme production may become possible and also so that the results of production at the time of practical training may be played back immediately.</p> <p>Audio production equipment to be provided will include a 16-channel audio control console to process input materials, a disc player, a CD player, a tape recorder and a cassette tape recorder.</p>

Component	Major Equipment	Function
(2) Video programme production studio-2	<ul style="list-style-type: none"> • Camera (portable-type) • Caption Scanner • Character Generator • Video Production Equipment • Audio Production Equipment (12CH) • VCR • Monitors • Inter-Communication Equipment • Lighting Equipment 	<p>The same as in the case of the Video Programme Production Studio-1, this studio will be used for the students' training and for the production of educational and cultural TV programmes.</p> <p>However, since its floor space is small at about 80m², the types and scales of the programmes that may be produced in this studio will be restricted to such programmes as small-scale music, dance, scientific experiment, educational lecture and talk programmes.</p> <p>As for the camera, portable cameras that can be also used as studio cameras will be adopted for the following reasons; in order to ensure that, by using a camera that is of a different type from the one used in Studio-1, the practical training conducted in this studio will be more effective; the floor space of the studio is small and therefore the programmes that can be produced in it will be of relatively small scale; and it is necessary to have a portable camera so that the programmes may cover what is taking place in the Jamia Millia Islamia University's auditorium which is built right next to MCRC.</p> <p>As to video production switcher and VCR, a similar policy to the one followed in equipping Studio-1 will be adopted.</p> <p>Roughly the same type of audio production equipment as that for Studio-1 will be adopted but the audio control console will be 12-channel, considering the number of input units.</p>

Component	Major Equipment	Function
(3) Audio programme production/ dubbing studio	<ul style="list-style-type: none"> • Audio Mixing Console • Multi-track Tape Recorder • Tape Recorders • Cassette Tape Recorders • Disc Player • CD Player • Signal Synchronizing Unit • Microphones • Monitors • VCR 	<p>This studio will be employed for radio programme production, audio dubbing and training of the students.</p> <p>From the viewpoint of studio scale, it is impossible to produce large-scale music programmes, but small-scale music programmes, language programmes, talk programmes, etc., can be produced in this studio. And, it is possible to dub foreign programmes into native language programmes or to dub self-produced programmes into any local dialect programme.</p> <p>Audio mixing console for controlling and mixing of audio sound, several kinds of reproducers for playback of audio materials and ancillary equipment such as microphones to get sound will be arranged and radio programmes can be produced.</p> <p>And, in addition to those equipment, a multi-track tape recorder for recording multi-sound separately, a signal synchronizing unit for synchronizing each equipment, and a VCR for playback of video programmes will be provided in order to make audio dubbing possible.</p>
(4) Post production studio	<ul style="list-style-type: none"> • VCRs • Editor • Video Production Equipment • Audio Production Equipment • Monitors 	<p>This studio will be used to produce programmes of maximum perfection through such processes as editing the video and audio materials recorded mainly in the studios and those procured from outside and the materials in films (editing work), adding video and sound effects to such materials, and readjusting the video and audio of the materials (post-processing) while inserting titles, diagrams, etc.</p>

Component	Major Equipment	Function
		In order to accommodate as many different types of materials as possible, low-band VCR and telecine chains will be provided.
(5) Master control room	<ul style="list-style-type: none"> • Sync. and Test Generator • Clock • Room to Room Communication Equipment • RF Signal Distribution Equipment • Videotape Duplicator 	This room is situated in the heart of each equipment room, and a sync. signal generator to distribute sync. signals to each studio, a master clock to drive the slave clocks located in major rooms, communication equipment to connect the major rooms, RF signal distribution equipment to distribute received TV signals, and a videotape duplicator to duplicate 1/2" or 3/4" type to VHS tapes for distributing those tapes to universities and organizations concerned will be provided.
(6) Editing equipment	<ul style="list-style-type: none"> • VCR • Editor • Monitor 	<p>Simple VCR editing system will be provided in order to compile the video tape materials recorded in studios and outside.</p> <p>Simple programme tape or tape materials almost completed in studio can be completed here but it is not possible to add video and audio effects, titles, pictures, etc.</p>
(7) Outdoor coverage equipment	<ul style="list-style-type: none"> • VTR in Camera • Audio Production Equipment • Monitor • Lighting Equipment 	<p>VTR in camera, portable audio production equipment and portable lighting equipment will be provided in order to record programme materials in the outside.</p> <p>By using those equipment, audio and video materials which are impossible to get in studio will be recorded and utilized for programme production. And the training for news gathering and outdoor coverage will also be carried out.</p>

Component	Major Equipment	Function
(8) Still-photography equipment	<ul style="list-style-type: none"> • Cameras • Slide Projector • Simple Developing Equipment 	In order to enable the students to learn the basics in video production, cameras for still-photography, a projector, and simple developing equipment will be provided.
(9) Presentation equipment	<ul style="list-style-type: none"> • Video Projector • VHS Video Tape Recorder 	In order to monitor the programmes self-produced by teachers and students or foreign programmes, a video projector and VHS video tape recorder will be provided.
(10) Power supply equipment	<ul style="list-style-type: none"> • Receiving Board • Distribution Board • Isolation Transformer • AVR • Generator 	Such equipment as an isolation transformer to prevent noise generated by lighting equipment, an automatic voltage regulator to control the fluctuation of voltage, a generator to enable use of part of the facilities at the time of a power failure, a receiving board and a distribution board will be provided.
(11) Measuring Instruments	<ul style="list-style-type: none"> • Instruments for Video System • Instruments for Audio System • Instruments for Lighting System • Instruments for Power Supply 	Various types of measuring instruments for maintenance and check-ups of equipment, and level setting for programme production will be provided.
(12) Spare parts	<ul style="list-style-type: none"> • Detailed spare parts list will be decided after contract. 	In consideration of expendable parts and important parts, spare parts in sufficient quantity to cover about two years will be provided.

3-2-5 Examination of the Contents of the Equipment Requested

Contents of the equipment requested are as described in 2-3 of CHAPTER 2 in which the process leading to the request and the contents of the request are explained.

The studio building has already been completed and all the equipment to be supplied under this Project will be installed in this studio

building. Therefore, the scale of the system will have to be set up according to the studio building. Furthermore, as for the training of students, the number of some types of video production equipment will be determined based on 30 students per group separated by grade with a total of 60 students two groups considering studio floor space and training curriculum.

Considering the fact that MCRC aims at fostering high-calibre personnel and that the programmes to be produced at MCRC are to be broadcast from the broadcasting stations, it needs to be made certain that the equipment to be provided under this Project are such as will enable the students who have been given training with the equipment to cope fully with the high technical level of the mass communication media in India. At the same time, such equipment need to be of specifications that assure reliability, stability, durability and facility in maintenance and operation. Although not included in the list of equipment requested by the Indian side, a generator for emergency use is considered necessary, as it was found during the study period that power failures were quite frequent in India (see ANNEX). A request for supply of this particular item of equipment was made by MCRC's side in the course of meetings, so this item has been added to the list of equipment to be provided, based on the judgment that the degree of its necessity is quite high in order to ensure effective operation of the equipment and facilities to be installed in the new studio building.

3-3 Project Description

3-3-1 Executing Organization and Operational Structure

The executing organization in the country for which this Project is intended is the Mass Communication Research Centre (MCRC) in the Jamia Millia Islamia University.

The Jamia Millia Islamia University is one of the ten central universities supported by the central government of India. The Ministry of Human Resources, which is the higher ministry supervising the University, is also maintaining a positive stance toward this Project and is extremely enthusiastic about ensuring its materialization.

The MCRC is India's only institute that teaches mass communication including its practical aspects. With a view to bringing this Project to reality without fail, the MCRC has specially invited an engineer with experience working in a TV broadcasting station as an officer to take charge of the engineering aspects of its work. In fact, the entire staff of the MCRC are full of enthusiasm to ensure success in the execution of the Project.

It is considered that there is no problem regarding the MCRC's managerial ability in executing this Project, in view of everything that the JICA study team was able to experience and observe throughout the period of its survey in India; including the MCRC's outstanding ability to cope with various problems (as observed, for example, in the answers given to a questionnaire or in the way the MCRC has been maintaining coordination with other organizations) and the fact that the MCRC has already drawn up detailed plans and, in accordance with these plans, has successfully constructed the studio building.

3-3-2 Plan of Operation

At present, MCRC is actively engaged in the work of fostering high-calibre personnel for the mass communication media by conducting a 2-year master's course which includes teaching the theories on and giving practical training in the production of programmes for use in radio, TV, film and audio-visual education. At the same time, MCRC produces educational programmes at the request of UGC and other institutions.

Through the completion of this Project, MCRC plans to expand its operation as follows.

At present, MCRC has a total enrollment of 60 students in its 2-year master's course, accepting 30 students each year. Under this Project, the period of the master's course will be extended from the present two years to three years and, at the same time, the enrollment each year will be increased to 60, so that the total enrollment in any given year will be increased up to 180. Thus, efforts will be made to foster a maximum number of personnel who are capable of coping with the steadily rising technical standards of the mass communication media in India. Although MCRC at present conducts training of only software production personnel such as programme producers, it plans to set up in future a course for the training of engineering staff as well. As to the production of educational programmes, too, MCRC plans to respond more effectively to the requests, from UGC and other organizations, to double the output.

3-3-3 Location and Condition of Project Site

The Mass Communication Research Centre (MCRC) has a plot of land of about 39,000m² in area in the southeast of New Delhi. And on this site, the MCRC has already constructed a new studio building containing two video programme production studios (150m² and 80m²) and one audio programme production studio. This Project has the objective of providing and installing the required equipment in this new studio building.

The Project site is located in New Delhi and there is no problem about this site concerning construction work, since the infrastructure, including the roads and power source, is in good order. Fig. 3-3-1 shows the proposed Project site.

As to the building that has already been constructed, there is no particular problem, such as leaking of rain. However, the sub-control room for the video programme production studio, in which the studio equipment are to be installed, is not big enough and needs to be enlarged. For that purpose, some remodelling work needs to be done.

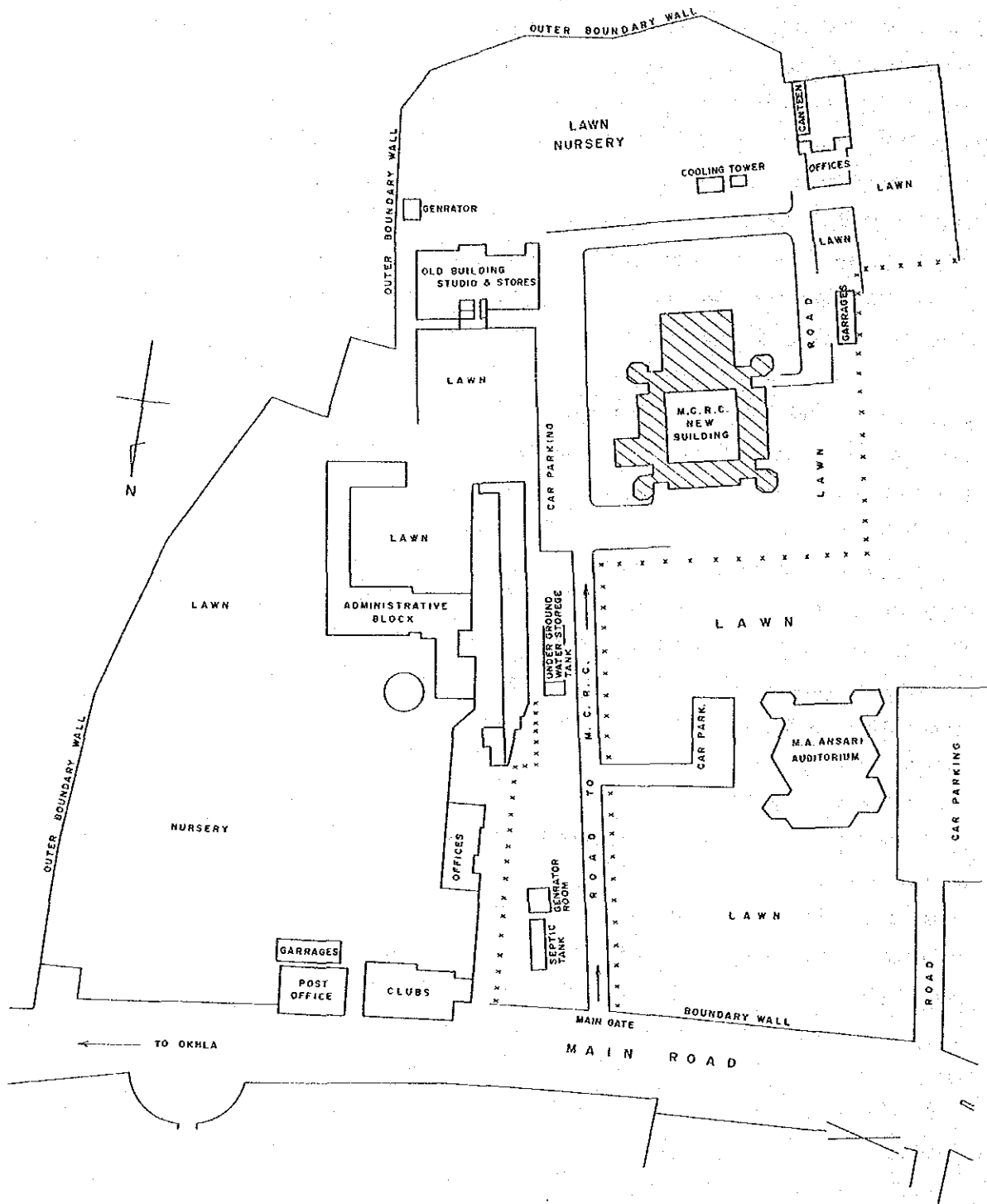


Fig. 3-3-1 SITE LAYOUT OF MCRC

3-3-4 Outline of Facilities and Equipment

(1) Video Programme Production Studio - 1

This is the medium size studio with 150m² of floor space in the new studio building.

Taking into account the fact that the students are to learn studio production techniques here and that production work on educational and cultural programmes (dramas, puppet shows, music, talks, dance, scientific experiments, lectures, etc.) will be conducted in this studio, video and audio production equipment, lighting equipment and accessory equipment will be allocated to this studio.

(2) Video Programme Production Studio - 2

Since this studio with 80m² of floor area is smaller than the above-mentioned production studio-1, it is difficult to produce such programmes as dramas, and large-scale music and dance programmes.

But, equipment will be provided in such a manner as to enable production of such programmes as scientific experiments, talks and lectures, as well as the training of students.

(3) Audio Production / Dubbing Studio

This studio will be so equipped as to enable training of students and the production of audio programmes and voice-dubbing of the video programmes.

(4) Post-production Studio

In order to edit the video and audio materials recorded either in a studio or outdoors and, at the same time, to add video and audio effect to these materials so as to produce programmes of the highest possible quality, the post-production studio will be equipped with an editing system using a cassette VTR, a video console, an audio console, and effects equipment for both video and audio use.

(5) Master Control Room

The master control room will be equipped with such equipment as a signal generator to distribute synchronizing signals to the above-mentioned studios, a clock system, interroom communication equipment, RF signal distribution equipment and a videotape duplicating system.

(6) Editing Equipment

A simple-type editing machine using cassette VTR will be installed so as to enable editing of the programmes recorded in studios and outdoors and training of students.

(7) Outdoor Coverage Equipment

In order to enable recording of programme materials outdoors and training of students, such equipment as VTR, camera, audio equipment and lighting equipment will be provided.

(8) Still-photography Equipment

In order to enable the students to learn the basics in video production, cameras for still-photography, a projector, and a simple developing device will be provided.

(9) Presentation Equipment

In order to enable many persons to monitor educational programmes together, a video projector will be provided.

(10) Power-Source Equipment

Such equipment as an insulating transformer to prevent noise generated by lighting equipment, a generator to enable use of a part of the installations at the time of a power failure, a receiving board and a distribution board will be provided.

(11) Measuring Instruments

Various types of measuring instruments for maintenance and check-up of equipment will be provided, such as oscilloscopes, audio test sets and TV signal generators etc.

(12) Spare Parts

Spare parts in sufficient quantity to cover about two years will be supplied.

(13) Others

Special parts, such as tapes for test use and attachments for microscopes, will be provided.

(14) Installation Materials

Various types of cables, wire-rods, connectors, tapes, etc.

3-3-5 Operation and Maintenance Plan

(1) Personnel Plan

The personnel that will become necessary after completion of this Project are shown in the following Table 3-3-1 in comparison with the current number of personnel in 1990.

Table 3-3-1 Numbers of Personnel before and after the Completion of the Project

	1990	After Completion	Increase
Office of the Chairman	3	3	0
Engineering Wing	27	76	49
Production Wing	24	39	15
Teaching Wing	15	18	3
Administrative & Accounts Unit	23	57	34
Library	4	4	0
Management of the New Studio Building	0	9	9
Total	96	206	110

For the operation of MCRC after completion of this Project, an increase of 110 in the number of MCRC's personnel is required.

The maintenance and repairs of installations and equipment will be conducted mainly by the engineering staff. As to the current engineering staff of 27, they have been judged, through the training given them overseas (Canada, West Germany, etc.), as possessing a certain level of knowledge about the equipment that are to be provided under this Project. Hence, this engineering staff will be able to cope adequately with the operation and maintenance of equipment and installations after the completion of the Project, based on the additional knowledge and experiences they will gain in the current on-the-job training to be given them during the period of installation work.

However, as for the personnel to be newly employed, training is indispensable. Therefore, it is desirable to consider taking such steps as accepting some personnel for training in Japan around the time of completion of the Project.

(2) Budget Plans

The estimated increases in the amounts of operational expenses after execution of this Project are as follows:

1) Personnel Expenses

The estimated total increase in the amount of personnel expenses following the increase in the number of personnel by 110 is 3.225 million rupees/year. Its breakdown is:

- Engineering staff 1,470,000 Rp. (30,000 Rp./year × 49 persons)
- Production staff 480,000 Rp. (32,000 Rp./year × 15 persons)
- Lecturers 150,000 Rp. (50,000 Rp./year × 3 persons)
- Administration/
Accounts staff 918,000 Rp. (27,000 Rp./year × 34 persons)
- Management staff 207,000 Rp. (23,000 Rp./year × 9 persons)
for the new studio
building

2) Facilities Maintenance and Repair Expenses

The maintenance and repair expenses are the expenses required for check-ups, adjustments and repairs of equipment and procurement of spare parts necessary for the changing of parts, and for any other measures needed to be taken in order to ensure that the facilities maintain their original functions until the end of their service life.

In view of the examples of some of the past similar projects and also of the experiences that broadcasting stations have had in Japan, there is the need of earmarking 1% of the total equipment costs to cover the annual expenses for maintenance and repairs.

Thus, the annual maintenance and repair expenses under this Project are estimated to total about 9 million rupees.

3) Increase in the Consumption of Videotapes for Programme Production

As the number of programmes to be produced is planned to be doubled, the consumption of videotapes, too, is expected to increase proportionately.

(Increase of 5 rolls a month)

Assuming that a roll of videotape costs 3,000 rupees, the annual increase in expenditure would be:

$$3,000 \text{ Rp.} \times 5 \text{ rolls} \times 12 \text{ months} = 180,000 \text{ Rp.}$$

4) Expenses for Power Consumption

The expenses for power consumption in the new studio building are estimated at 300,000 rupees/year.

5) Others

As a result of the scheduled increase in the number of students admitted each year and also of the extension of the period of the master's course, the MCRC estimates an increase of 440,000 rupees/year to cover such additional expenses as ① the fees paid to the guest lecturers from other universities, influential journalists and ② scholarships.

The amount of increase in operational expenses of MCRC resulting from the implementation of this Project is estimated at 13.145 million rupees, which corresponds to about 0.4% of the annual budget of UGC. However, it is considered that there will be no problem, in view of the fact that MCRC's 1990 budget shows an increase of 50% over that of its 1989 budget and also that the Ministry of Human Resources, which is an organ that supervises UGC, has referred to the need of taking necessary budgetary measures to cover the estimated increase in MCRC's operational expenditure after completion of the Project.

3-4 Technical Cooperation

As to technical cooperation, no formal request has yet been made by the Indian government. However, in the course of the consultations between the Indian side and the JICA study team, some soundings have been made, indicating a strong desire to receive Japanese experts. The MCRC is very confident of its capability of handling the work of operating and maintaining the equipment. In addition, the MCRC is also keenly interested in the highly efficient Japanese programme production techniques.

In view of the circumstances as outlined above, it is highly likely that a request for technical cooperation will be made by the Indian government to the Japanese government in the future.