

CHAPTER - IINTRODUCTION1.0 Process of instruction

The present era is characterised by factors, such as, a rapid increase in population, and a remarkable growth in knowledge. Owing to these, the society is changing at a much faster rate than earlier. These factors have brought the necessary impetus for the individual to remodel himself, so as to adjust to the changing needs of the society. Individual remodelling would be in terms of becoming aware of the rapid changes that are occurring in the society, and tackling the problems posed by the fast changing society effectively through his abilities and skills and thereby adjust himself suitably. It has been generally accepted that individuals who are not active, and not aware of the changes that are occurring in their surroundings, and lacking the necessary abilities and skills cannot effectively cope with the multiplying issues and problems. Unless the individual renews himself as rapidly as the changes that are occurring in the environment, it may be difficult for him even to exist. The educational system has to play some role in helping the individuals to adjust to the changing environment.

Educational system comprises of the societal expectations as reflected by the parents, teachers and the curriculum; the learners with their unique psychological make up - their needs and aspirations; the learning environment; the teachers; the instructional materials and media; the organizational infrastructure, and various other components, and the forces they exert. These forces, their very number, and the interplay among them make the educational system and its dynamics highly complex. Perhaps, of the different subsystems of the society, such as, social, political, economic, etc., the subsystem of education can do no better service than helping the individual to remodel himself through equipping him with necessary abilities and skills. This role of education in the remodelling of the individual puts a heavy premium on the process of instruction, since instructional process forms the core of the educational system.

As a matter of fact the educationists have been continuously proposing different models of instruction for long with a view to maximise the effectiveness of instruction. In this process they have tried to apply the other disciplines, such as, physical and behavioural sciences. Application of the physical sciences like Chemistry and Physics has provided various equipments, such as, radio, television, films, slides, audio-tapes, video-tapes etc. Similarly, application of the behavioural sciences like Communication, Psychology, and Sociology to instructional situations has provided various

techniques, such as, programmed learning material (PLM), lecture, discussion, seminar, team-teaching etc. Application of these equipments and techniques to make the educational process effective in terms of achievement of objectives is known as educational technology. Educational technology has been made use of in different ways. Some of these are technology of mass instruction or large group instruction, and the technology of individual instruction. Radio, television, films, newspapers etc. are implements of the technology of mass instruction, whereas, teaching machines, programmed learning material, text books etc. belong to the technology of individual instruction. It may be quite feasible to evolve a system of instruction in which the teacher, the mass instructional technology, and the individual instructional technology are harmoniously co-ordinated. This would bring in a new coherence through which the strengths of one channel may be used to counteract the weakness of another.

The teacher finds an important place in the instructional process. In the light of the fast development of knowledge the teacher faces a two way challenge: one, he has to keep abreast of the different advancements in knowledge, the different sources and media that reveal these. And, two, to enable learners in acquiring the experiences to select, organise, and retrieve information. This is more challenging, as a teacher generally has to deal with a group of learners, who differ greatly in terms of their abilities,

and capacities. Also different learners have different experiences. Such a variety of learners is to be dealt with by the teacher so as to draw the best out of each. For this their abilities, capacities, and experiences have to be channelised so as to achieve the desired behavioural changes in the most effective way. These changes include changes to be brought about in knowledge, skills, attitudes, interests, and such other attributes. These changes in the learners can be brought about by providing them a variety of learning experiences through different sources, media, and techniques.

The selection of these methods and media depends upon the learning experiences to be provided, characteristics of the learners, physical facilities available, and skills of the teacher to apply them, so as to achieve the instructional objectives in the most effective way. After selecting the most suitable of these available factors, the teacher has to sequence the process of instruction in the classroom. In other words attainment of the anticipated behavioural outcomes depends very much upon an intelligent selection of different methods and media and their effective utilisation in the classroom.

As mentioned earlier, the demands for education have become so critical that all countries of the world are confronted by an array of problems involving enrolment, cost,

teachers, management, curricula, and teaching methods. The use of some form of mass medium to support the efforts of teachers in schools is highly desirable. Mass media like radio, television and films are being used in the instructional process for various reasons, such as, wide coverage, uniformity of presentation, economy of cost, etc. Schramm et.al.(1967) have termed them as the new educational media in action. They have stated:

"Developing countries every where, struggling to meet their vast and urgent educational demands, are confronted by formiddable obstacles: shortage of teachers; facilities and money; outmoded curricula and instructional materials; inadequate and overtaxed administrative structures; scattered population hard to reach; traditions and inertias resistant to change.

Searching for ways to overcome these obstacles, educational leaders and planners in these countries have been asking persistent questions - of the IIEP (International Institute for Educational Planning), among others - about the so-called 'new educational media', such as television, radio, films, and programmed learning. Might these be of help to them?

Specifically they have asked: Can these new media produce good educational results? What do they cost, can we afford them - and under what circumstances?

What are the practical administrative, logistical problems involved? How do we plan their use, and how do we get started?" (UNESCO, 1967)

It is hoped that these media can help substantially in various types of education. Before putting them into action, the potentialities of the media are to be ensured.

1.1 Radio as a medium of instruction

Radio is a commonly used medium. It has been used in the instructional process since long. It offers the possibility of extensive deployment in education because of the infrastructure available, availability of low cost radio receiving sets, and our long experience with the medium. The classroom instruction is supplemented through radio with the help of experts and artists, innovative programmes, updated information, and devices and techniques as may be beyond the reach of an average school. Enriched learning experiences are offered through radio. Well organised presentation, sound effects, and music are appealing to the pupils. Various language skills, especially listening and speaking are developed through radio programmes. Pupils listen to the radio programmes attentively as they know that if they miss something they may not be in a position to listen to it again. It could very well be assumed that while listening to radio programmes, the pupil are trained in such linguistic aspects

as pronunciation, articulation, intonation, volume and pitch. Radio, being a powerful auditory medium, evokes imagination in the minds of the children. Supported by visual materials the potential of radio becomes enormously high. Further, within the classroom so many things are left to be visualised by pupils on their own; especially in the lower grades the pupils have to associate different sensory stimuli like voice, figure, symbol. Providing the necessary visual stimuli with the relevant auditory stimuli will not only enable the child to understand the idea or concept clearly, but also provide direction to imagination and associations. Such first hand stimuli infused into the lesson act as support to the visual and auditory perception of the students.

Teachers are also benefitted through the radio programmes for the pupils. They get an opportunity to learn more about the content, and methodology when they listen to these programmes. The inservice training of teachers may be organised not only in this indirect way; it may also be one of the main purposes of broadcast programmes. Thus it is clear that radio has its own instructional potential.

1.2 Radio broadcasting in India

Radio broadcasting service in India was initiated at Madras by the Madras Presidency Radio Club on July 31, 1924 (Khatri, 1977). After this Indian Broadcasting Company started radio broadcasts from Bombay in 1927. Indian

Broadcasting Company went into liquidation in 1930. Broadcasting was then taken over by the Government of India, and operated in the name of Indian State Broadcasting Services. It was on June 8, 1936 that the designation of the Indian State Broadcasting Service was changed to "All India Radio (A.I.R.)". Since 1957, it is known as Akashvani. A.I.R. is now the biggest media organisation of the Ministry of Information and Broadcasting and its programmes are received through over 20 million radio receiver sets in India. Now there are 84 stations of A.I.R. including two Vividh Bharati/ Commercial Centres, one at Chandigarh and the other at Kanpur. The 84 radio stations as on 31st December 1979 grouped into four zones, are the following: North Zone: Ajmer, Allahabad, Bikaner, Chandigarh, Delhi, Gorakhpur, Jaipur, Jammu, Jodhpur, Jullundur, Kanpur, Leh, Lucknow, Mathura, Nazibabad, Rampur, Rohtak, Simla, Srinagar, Udaipur, and Varanasi; East Zone: Agartala, Aizawl, Bhagalpur, Calcutta, Cuttack, Darbhanga, Dibrugarh, Gauhati, Imphal, Jeypore, Kohima, Kurseong, Ranchi, Pasighat, Patna, Sambalpur, Shillong, Silchar, Silliguri, Tawang, and Tezu; West Zone: Ahmedabad, Ambikapur, Aurangabad, Bhopal, Bhuj, Bombay, Chattarpur, Gwalior, Indore, Jabalpur, Jagdalpur, Jalgaon, Nagpur, Panaji, Porbhani, Pune, Raipur, Rajkot, Ratnagiri, Rewa, Sangli, and Vadodara and South Zone: Alleppey, Bangalore, Bhadravati, Calicut, Coimbatore, Cuddapah, Dharwar, Gulbarga, Hyderabad, Madras, Mysore, Mangalore, Pondicherry, Port Blair, Tiruchirapalli, Tirunelveli, Trichur, Trivandrum, Vijayawada, and Visakhapatnam. In addition, there are two auxiliary studio centres at Bhubaneswar, and

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Santiniketan. The 'home service' programmes which are beamed from 157 transmitters, of which 124 are medium wave, cover 77.6 percent of the geographical area and 89.35 percent of the population of the country. In addition there are also 'external service' transmissions, which present programmes in 17 foreign languages and 8 Indian languages for about 56 hours daily.

In the 'home service' programmes (excluding Vividh Bharati programmes), during the year 1978, 38 percent of the broadcasting time was claimed by music, 24 percent by news, 11.3 percent by spoken words, that is, talks, discussions etc., 3.6 percent by drama, 5.6 percent by rural programmes, 1.6 percent by tribal programmes, 1.1 percent by children programmes, 1.5 percent by women programmes, 1.3 percent by industrial programmes, 1.3 percent by the programmes for the armed forces, 3.3 percent (11996 hours and 13 minutes) by educational programmes, 2.3 percent by publicity (announcements), 0.1 percent by religious programmes, and 5.0 percent by other programmes. The total time claimed by Vividh Bharati programmes was 144317 hours and 43 minutes, out of 511589 hours and 50 minutes - the total broadcasting time claimed by the 'home service' programmes (INDIA - a Reference Annual - 1980).

1.3 Radio as an instructional medium in India

The broadcasts for school children were initiated by the Municipal Corporation of Madras in 1929. In the year 1937,

the Education Department of the then Government of Bengal, and the University of Calcutta evinced considerable interest in educational broadcasts. The Calcutta station of A.I.R. included regular broadcasts of 30 minutes duration for school children twice a week from November, 1937. Other stations followed suit in 1938 (Madras), and after. Thirty-five stations of A.I.R., namely, Ahmedabad, Baroda, Rajkot, Bhuj, Bombay, Poona, Nagpur, Madras, Tiruchirapalli (Tiruchi), Trivandrum, Calicut, Lucknow, Allahabad, Bhopal, Indore, Srinagar, Jammu, Calcutta, Kurseong, Hyderabad, Vijayawada, Bangalore, Dharwar, Jaipur, Simla, Patna, Jullundur, Gauhati, Cuttack, Panaji, Kohima, Delhi, Shillong, Port Blair, and Rohtak (as in January 1979) are originating programmes for school children. These programmes are relayed by 25 A.I.R. stations (A.I.R. 1979).

The broadcast programmes for secondary school children are mostly syllabus oriented and aim at helping them by updating their content knowledge, filling curricular gaps, and providing new approaches and techniques of presentation. There are also non-syllabus programmes, the purpose being to stimulate learners to an awareness of the modern world in its various aspects like current affairs which may not be sufficiently covered through school instruction. Broadcasts for primary school children are related to their environment as far as possible.

Each State has its own school syllabus. So, there is no central planning and production of the radio programmes for

school children. The sole exception is English programmes (primary and secondary series) prepared by Central Institute of English and Foreign Languages (C.I.E.F.L.), Hyderabad in collaboration with A.I.R., which are used in many States.

There have been large changes in content and methodology. New approaches have been brought about in the scope of subjects, such as, mathematics, science, and social - studies. Teachers have to be oriented to these changes. Hence, many A.I.R. stations are now beaming special programmes for teachers.

Radio-cum-correspondence inservice teacher training programmes are organised in five States for training teachers in various subjects at school level. The Government of Kerala in collaboration with A.I.R. Trivandrum started a radio-cum-correspondence inservice teacher training programme in 1975. Similarly a 'Teach English - Learn English' programme for improving the quality of teaching English in schools is going on in Gujarat. Maharashtra, Assam and Tamil Nadu also have radio-cum-correspondence inservice teacher training programmes.

There are broadcasts for university students which are of two kinds. One is general enrichment service which is mainly a part of the Youth Programme. The other is a special service of radio support to correspondence education for B.A./B.Com. degree courses of four universities. The radio support is given by Delhi, Tiruchi, Jullundur stations of A.I.R. to the

correspondence courses from Delhi University, Madras University, Punjab University, Chandigarh and Punjabi University, Patiala.

The Government of India launched the National Adult Education Project (N.A.E.P.) from October 2, 1978, and A.I.R. is supporting the project with appropriate programmes. Non-formal education broadcasts for adults are transmitted from thirteen stations of A.I.R., namely, Calicut, Tiruchi, Nagpur, Simla, Srinagar, Jaipur, Udaipur, Trivandrum, Vijayawada, Cuttack, Jeypore, Calcutta, and Pondicherry.

Non-formal education broadcasts for children (9 - 14 age group) are transmitted from two stations of A.I.R., viz. Bhopal and Tiruchi.

A pilot project for teaching the mother-tongue as a first language through radio was started in Jaipur, Rajasthan in July 1979. The Centre for Educational Technology (C.E.T.) of N.C.E.R.T. is incharge of this project. About 500 schools in Jaipur and Ajmer districts are participating in this project which aims at teaching Hindi to children in the first three grades. The first year programmes were addressed to the first grade, to be followed by programmes for the second and third grades.

This in brief, is a picture of educational broadcasts in India. The educational broadcast programmes for the

school children and teachers are known as school broadcast programmes (SBPs).

The Chief functionary in the field of educational broadcasts is known as Chief Producer of educational broadcasts. Next to him is the Assistant Director of educational broadcasts. Their office is in the Directorate General, A.I.R., New Delhi.

Every station of A.I.R. with an educational broadcasting service has a unit with four staff positions, namely, Producer, Assistant Editor, Production Assistant, and Programme Secretary. The unit is known as educational broadcast unit. For the purpose of school broadcast programmes the educational broadcast unit is called school broadcast unit.

All India Radio recruits its educational broadcast personnel, such as, Producer, Assistant Editor, Production Assistant from among experienced teachers and educationists who have an aptitude for the medium. They are trained in A.I.R.'s staff Training Institute at New Delhi, or at the two regional centres of the institute at Hyderabad and Shillong. It is both on the job as well as initial training. Periodical seminar/workshops are held at the regional or zonal levels for exchange of ideas. Some of the Producers have done training stints abroad in British Broadcasting Corporation, U.K.; Australian Broadcasting Commission, Australia; Nihon Hoso Kyokai, Japan; and Asian Institute of Broadcasting Development,

Kuala Lumpur (Malaysia). Experts from the schools, and other institutions are given contracts to prepare the scripts. These experts are known as script writers.

State Education Departments are expected to co-operate with A.I.R. in the planning, production, and utilisation of the school broadcast programmes. Help of various agencies, such as, State Council of Educational Research and Training (S.C.E.R.T.) State Institute of Languages, State Institute of Science Education, State Institute of Education (S.I.E.) is sought by the school broadcast units for planning the school broadcast programmes. Educational Technology Cells have been set up in twenty one States. These cells are expected to take active part in school broadcast programmes.

1.4 Research efforts

Classroom instruction is an organised system. For the effective attainment of the instructional objectives it is necessary to examine the different components of the system independently and in relation to each other. The different media and materials used for the attainment of the objectives of instruction form a subsystem of the total instructional system. As stated earlier, there are several media used in the instructional process of which radio is one. The function of radio as a medium for classroom instruction is to supplement the classroom instruction. How far the school broadcast programmes function effectively is to be examined. A few

studies at individual and departmental level have been conducted in our country to study the functioning of the school broadcast programmes. They have been detailed below with a view to presenting the study under investigation in clearer perspective.

Centre for Educational Technology of N.C.E.R.T. (1975) conducted a study on the functioning of school broadcast units of A.I.R. all over the country, and a detailed analysis of utilisation of school broadcasts in Jaipur (Rajasthan). The study was done in two phases. The first phase was designed to collect information on the functioning of different school broadcast units of A.I.R. The information was collected through a questionnaire from 23 school broadcast units all over the country.

The second phase was intended to study the functioning of school broadcast unit, A.I.R. Jaipur, and utilisation of school broadcast programmes in Jaipur district. The data were collected through a questionnaire from 583 students drawn from 28 primary, middle, and secondary schools of Jaipur district. Also, interviews were conducted with the school Principals, Officials of the District Education Department and that of A.I.R. Jaipur.

The findings of the Phase 1, that is, functioning of the school broadcast units all over the country based on the

information collected through questionnaire from 23 school broadcast units are given below:

The staff in the school broadcast units was insufficient. None of the script writers were formally trained in preparing scripts. Five out of the thirteen Producers of educational broadcasts had received training in producing ^{ch} school broadcasts.

There was good measure of co-ordination between the school broadcast units and the State Education Departments in planning the programmes. There was no co-ordination from the State Education Departments in obtaining feedback from the schools.

The number of school broadcast programmes from different school broadcast units ranged from 2 to 20 per week. The number of standards exposed to school broadcasts ranged from 2 to 11. Five units broadcast programmes on one subject, ten units took up 2-3 subjects, five units broadcast programmes on 4-6 subjects, while the remaining units took up more than six subjects in a year. Apart from the programme schedule chart, 14 out of the 23 units prepared support material for schools. Sixteen out of the 23 units broadcast programmes for school teachers. The number of schools registered with the different units ranged from less than a hundred to more than fifteen hundred.

The findings of the Phase II, that is, detailed analysis of utilisation of school broadcasts in Jaipur are given below:

The staff in the school broadcast unit, A.I.R. Jaipur was insufficient. The Producer of educational broadcasts was not formally trained in producing school broadcasts. Different subject committees had worked independently and had not co-ordinated in presenting the programme series in a joint and sequential manner. There was no co-ordination between A.I.R. Jaipur and the State Department of Education in planning, production and utilisation of the school broadcast programmes.

The listening facilities in the schools were inadequate. Students from three out of the twenty-eight schools were aware of the day and the time of school broadcasts for their respective classes. In none of the 28 schools was radio tuned to school broadcast programme on the day of the visit by the investigator. Non-availability of programme chart, and timetable being too crowded to accommodate a period on school broadcasts were the main reasons for non-integration of the school broadcast programmes with classroom instruction. Moreover, there was an absence of firm policy and emphasis by the State Department of Education on school broadcasts.

The school teachers recognized the potential of radio as a medium for classroom instruction, but at the same time

most of them were of the view that the school broadcast programmes were not complete in themselves and these were not presented in an interesting and effective manner.

C.E.T. of N.C.E.R.T. (1977) conducted a study on primary school broadcasts in Jalgaon (Maharashtra). An intensive District Education Project was launched in Jalgaon in September, 1970 with financial assistance from the Union Ministry of Education and Social Welfare. It was handed over to the State Government in 1973-74, and was termed as the District Education Project. As a part of the project 150 primary schools spread over the district had been provided with radio sets, and teachers' guidance notes. The data were collected through questionnaires, and interviews with the headmasters, teachers, and students of 63 project schools and 16 non-project schools. Views of the officials of the Education Department, and that of A.I.R. Pune and Jalgaon were also obtained on school broadcasts.

It was found that 92% of the project schools utilized school broadcast programmes to a more or less extent during the year 1976-77 as against 25% non-project schools. Among various factors that contributed to relatively greater acceptance of radio in the project schools, the salient ones were, organisational structure, provision of radio sets, provision of teachers' guidance notes, supervision of radio listening activity, maintenance of listening records, and feedback mechanism.

There were some limitations to the utilisation of school broadcasts even in project schools. The study revealed that on an average only about half of the school broadcast programmes were listened to. Some of the limiting factors are given hereunder:

- (i) The teaching of a lesson on radio generally did not correspond with the sequence of teaching of the particular lesson in the class.
- (ii) There was no provision for radio broadcasts in the school time-table by the State Education Departments.
- (iii) The broadcasts were not clearly audible.
- (iv) There was discontinuity in the provision for radio servicing.
- (v) Listening to radio caused disturbance to the adjoining class.
- (vi) At times the programmes were presented at a faster speed than could be properly comprehended by the students.
- (vii) The language used in some of the broadcasts was difficult.
- (viii) The programmes for the teachers were the least utilised, because the timings of the broadcasts did not suit them.

The teachers held a positive attitude towards the school broadcast programmes.

C.E.T. of N.C.E.R.T.(1979) has undertaken a project for teaching first language (Hindi) through radio in Rajasthan. The project is being implemented in 483 primary schools of 15 Panchayat Samities in the districts of Ajmer, and Jaipur in Rajasthan. It started on 9th July 1979 with fresh entrants to grade I, to be continued with grades II and III during 1980-81 and 1981-82 respectively.

Considering the four major objectives of language learning, namely, reading, writing, speaking, and listening, materials and techniques were devised so that all the four aspects get due attention in the classroom. There was a daily broadcast of fifteen minutes, especially prepared for this audience. The objectives of the broadcasts were to increase children's vocabulary and develop listening skills.

All the schools were given receiving sets which could be operated on the battery cells. Five hundred and fifty teachers from the 15 Panchayat Samities where the programme was to be implemented were trained in the utilisation of the materials. Monitoring and evaluation was a regular activity in the project.

In April, 1980 an attempt was made to assess the progress of the children. For each of the working day, one project school was selected at random, the other project and non-project schools were selected from amongst the group of the schools which would be on the same route. Tests for reading, writing, analogy (for language development), and listening skills were prepared and administered to 4 to 5 children in each school that was visited. Data from 99 project schools and 70 non-project schools were available.

Mean scores were calculated for each Panchayat Samiti for project and non-project children, for tests of reading, writing, analogy (for language development), and listening. The achievements of the children in the project schools were higher than those in non-project schools. Impact of these programmes was more in the district of Ajmer than in Jaipur. On tests of reading, analogy, and listening, project schools in Ajmer district scored, on the average, 25% more than the children in the non-project schools. This average came down to 10% (approximately) in Jaipur. In writing, the percentage score in Ajmer was approximately 10% higher for the project children, but the gain was almost nil in Jaipur. The success in writing (dictation) was the least.

C.E.T. of N.C.E.R.T. (1980) conducted a study on the functioning and utilisation of school broadcasts in Delhi. Observations on school broadcast utilisation were done on the

spot in a randomly drawn sample of 205 middle and secondary schools from 532 schools having listening facilities, at Delhi (List made available by A.I.R. Delhi). The sample included both Delhi Administration schools and aided schools spread over all four educational zones and three educational districts under each zone in Delhi. Other data were collected by interviewing teachers, officials of A.I.R. and the Directorate of Education. It was found that the A.I.R. had the total responsibility of programme planning. The Directorate of Education, Consultative Panel, and Subjectwise Planning Committees did very little in this regard.

Script writers were not briefed about objectives and scope of lessons, only titles were indicated. This allowed for a great deal of subjectivity in preparing scripts. The script writers were not trained in preparing scripts.

There was no provision for school broadcasts in the school time-table by the Directorate of Education. School teachers were not trained in utilising radio as a medium for classroom instruction. Radio was found tuned to school broadcast programmes in 12% schools of the total sample at the time of on the spot observations. In rest of the schools radio was not in use for one reason or another. There was little evidence of pre-broadcast discussions conducted by the teachers. Post-broadcast discussions were held in 56% of the listening schools.

In 32% cases there was some proximity between radio programmes and the teaching of those lessons in the class. 36% programmes contained too much information packed into them for students to comprehend all at one time; and 8% programmes fell into the other extreme of having few learning points.

Reception of the programmes on the receiving sets was 'poor' in 4% schools, 'not so clear' in 28% schools, and 'clear but not audible to all students' in another 12% schools.

Students initial level of achievement in respect of five programmes tested for their understandability was 32 to 42% of the maximum score value. After listening to the programmes, the pre-post test group gained on all programmes to an extent ranging from 7 to 11 percent.

There were some difficulties in utilising school broadcasts, such as, insufficient number of radio sets, no separate room even for collective listening, absence of electricity, non-availability of programme charts, etc.

The teachers were in an ambivalent state of mind towards school broadcasts.

Mohanty and Giri, Educational Technology Cell, Orissa (1976) conducted a survey on school broadcasts. One hundred and ninety schools were selected from five districts, namely,

Cuttack, Puri, Ganjam, Mayurbhanj, and Dhenkanal. The data were obtained through questionnaires and interviews from the headmasters and teachers. The findings are as follows:

- (i) Although there were radio sets in many high schools, they were not properly maintained and utilised.
- (ii) Usually, the teachers did not attend the school broadcast programmes alongwith the pupils.
- (iii) Pre-and post-broadcast activities were not carried out in most of the schools.
- (iv) The duration of the school broadcast period was not sufficient.
- (v) Most of the programmes were in the form of narration and discussion.
- (vi) English lessons had greater scope for improvement, particularly, with respect to content and pronunciation.

Educational Technology Cell, Directorate of School Education, Tamil Nadu (1978) conducted a study on the utilisation of school broadcasts in primary schools of Tamil Nadu. The data were collected through questionnaires and interviews from the students and headmasters of 100 primary schools in Chingleput and North Arcot districts. The findings are presented below:

- The programme charts and support materials were received by the schools in time.
- Most of the programmes were on social sciences.
- Eighty-seven percent schools had one radio receiver, each; whereas, 13% schools had more than one radio set. Most of the radio sets were battery operated. None of the schools had extension speakers, Public Address system, and tape recorders.
- Timings of the broadcasts were suitable to most of the schools. Students were well aware of the time and day of the broadcasts.
- Pre-and post-broadcast activities were systematically arranged.
- Quiz programmes and programmes about visits to places were liked most by the students.
- Teachers had positive reactions towards school broadcasts.
- Almost all the schools maintained listening records, but the entries were not made under the proper headings.
- There were some limiting factors to the utilisation of the school broadcasts, as given below:
 - (i) There was a lack of synchronisation between the schedule of teaching in classroom and school broadcast.
 - (ii) The broadcasts were not clearly audible.

- (iii) Some of the programmes were broadcast with very high speed.
- (iv) The language used was difficult sometimes.
- (v) In schools having shift system there was no possibility of exposing the children to the radio lessons.
- (vi) There was no proper sequence in teaching particular lessons.
- (vii) According to some of the headmasters it was difficult to accommodate a period separately for radio listening in the already crowded time-table.
- (viii) There was want of facilities to expose several sections in a grade at the same time to the radio lessons.

Joseph(1976) conducted a survey to find out the extent of utilisation of school broadcasts in 22 secondary schools of Baroda City. The data were collected mainly through questionnaires and interviews from the students, teachers, and headmasters. The findings are listed below:

- (i) The listening facilities in the schools were inadequate.
- (ii) The pamphlets and other guidelines did not reach most of the schools from A.I.R.

- (iii) The timings of the broadcasts did not suit most of the schools.
- (iv) Hardly any school was found to have made provision for radio listening in the school time-table.
- (v) Teachers were not trained in using radio as a medium for classroom instruction.
- (vi) Pre-, during-, and post-broadcast activities were not conducted by the teachers.
- (vii) The Audience Research Officer's work did not seem to be very fruitful.
- (viii) The evaluation forms were not received from A.I.R. by most of the schools. So, the evaluation reports were not sent.
- (ix) The quality of the programmes remained static for a long period.

The study carried out by Shantha (1976) through questionnaires, and interviews with pupils, teachers, and headmasters of 12 schools of Bangalore city reveals that a majority of the pupils, teachers, and headmasters were in favour of the school broadcasts being held in first period of the afternoon sessions. Most of them wished that 45 minutes should be given to the broadcast period - 10 minutes for pre-broadcast activities, 20 minutes for broadcast, and

15 minutes for post-broadcast discussion. The study suggested that periodical meetings of broadcasters, teachers, and students should be held to evaluate, and modify the programmes in advance.

Sudame et.al.(1979) conducted a study on the planning and administration of school broadcasts from A.I.R. Cuttack. The data were collected through interviews with the personnel concerned in A.I.R. Cuttack. The findings are as follows:

- (i) The school broadcast unit, A.I.R. Cuttack was poorly staffed.
- (ii) The school broadcast programmes were not well planned.
- (iii) The planning committees for school broadcasts were not well structured.
- (iv) Teachers' notes (except on English lessons) were not supplied by A.I.R. Cuttack to the schools.
- (v) There was a need for more co-operation between A.I.R. and the various agencies involved in school broadcasts.
- (vi) Evaluation reports were not received adequately from the heads of the schools.

Biswal at C.A.S.E., Baroda (1980) conducted a study 'Developing strategies for effective utilisation of school broadcast programmes in Orissa State'. The study was conducted

in two phases. In the first phase, the study of the existing position of the school broadcast programmes and the development of the instructional strategies were taken up. In the second phase, the effectiveness of the strategies was compared with that of radio broadcast alone through experiments conducted in rural and urban situations. For studying the existing position of school broadcast programmes all the 70 experts involved in the production of the school broadcast programmes, and 120 teachers and 500 students from 94 programme user schools in Orissa State comprised the samples. The data were collected mainly through questionnaires. For developing strategies and their tryout, sixteen school broadcast programmes for grade VII produced by A.I.R. Cuttack, and a group of students from grade VII were taken as the sample. For the experimental validation of the strategies two groups of students each from a rural and an urban high school comprised the samples. Instructional materials like slides, workbooks, and instructional activities like role playing, quiz, field trip, team teaching, discussion etc. were developed to form instructional strategies. Criterion tests were prepared on sixteen school broadcast programmes for studying the achievement of students.

The study revealed that none of the experts were trained in preparing scripts for radio lessons. Sixty-two percent of the schools were found not using the school broadcast programmes at all. Absence of a radio set was the most

frequently mentioned reason for non-utilising the school broadcast programmes. Necessity of teachers' training on broadcast use was felt by most of the headmasters, teachers, and experts. Pre-, and post-broadcast activities were not conducted in most of the schools.

The study points out that radio as a mass medium has certain inherent weaknesses. It is distant, one way, impersonal, and it appeals to the aural sense only. The instructional objectives may be achieved to a greater extent if radio is mixed with the other media, suitably. The strategies developed by the investigator were significantly effective when compared to radio broadcasts alone in terms of students' achievement both in urban and rural schools.

Passi et.al.(1980) conducted a survey for starting radio broadcasts for primary and middle school teachers of M.P. State. The sample for the survey constituted of 524 teachers belonging to Raipur, Indore, Dhar, Gwalior, and Rewa districts of M.P. The data were collected through a questionnaire. The following are the findings:

- (i) Ninety-five percent teachers had the facilities for listening to the radio broadcasts.
- (ii) Eighty-eight percent teachers liked to have separate broadcasts for teachers.

- (iii) Eighty percent teachers were of the opinion that they had difficulties in teaching languages, science, mathematics, and geography.
- (iv) Fifty-one percent teachers were of the opinion that the radio broadcasts should be of 30 minutes duration.
- (v) Eighty-eight percent teachers liked to have broadcasts in the evening.
- (vi) Ninety percent teachers expressed that they had difficulties related to methods of teaching.
- (vii) Sixty-five percent teachers would like to write scripts for broadcasts provided orientation in writing script and guidance from time to time was provided to them.
- (viii) Apart from topics related to content and methods of teaching, broadcasts on some topics in general were also liked by the teachers.

Department of Communication Research, India Institute of Mass Communication, New Delhi (1980) conducted a survey to find out the radio listening habits of primary school teachers. The survey was conducted in three districts, Mohindergarh in Haryana, Almora in Uttar Pradesh, and Bangalore in Karnataka. Six-hundred and sixty-four teachers belonging to 216 schools at Mohindergarh, 227 teachers from 103 schools at Almora, and 269 primary and higher primary school teachers belonging to 52 schools at Bangalore constituted the sample for the study.

The data were mainly collected through questionnaires. The findings are as follows:

- 1 Forty-six percent of the primary school teachers covered in the study did not have a radio at their residence.
- 2 Sixty-seven percent primary school teachers listened to radio daily. Ten percent teachers were not exposed to broadcasting at all.
- 3 Most of the teachers (85%) listened to news bulletins regularly.
- 4 The most suitable time for listening to special programmes for the primary school teachers was found to be from 7.30 p.m. to 9.00 p.m.
- 5 Only in a few schools there were radio sets. Hence, radio listening in schools was almost non-existent.
- 6 Most of the teachers (83%) were not aware of the school broadcasts for the children.

Audience Research Unit, A.I.R. Ahmedabad (1980) conducted a survey on the utilisation of the 'Teach English' programmes originated by A.I.R. Ahmedabad-Baroda and relayed by Rajkot and Bhuj stations of A.I.R. for the school teachers in Gujarat. Roughly 200 schools were chosen proportionately from the different districts, out of more than 2750 secondary

schools in Gujarat State. Two questionnaires were mailed to each of the selected schools, and English teachers handling 8th and 9th grades were required to answer and send them back to Audience Research Unit of A.I.R. Ahmedabad. Two hundred and fifty seven teachers responded to the questionnaires. The findings are presented below:

- 1 Awareness of the teacher broadcasts was quite high among the respondents (100%).
- 2 Majority of the respondents (76%) were found to be occasional listeners (twice in a month).
- 3 Seventy-three percent respondents were found to be working in schools possessing radio sets.
- 4 Majority of the respondents (66%) listened to the programmes at home.
- 5 Opinion about the suitability of the time of broadcast was found to be divided. More or less equal number of respondents wanted the programmes to be in morning or evening.
- 6 Five percent respondents participated in at least one of the Workshop-cum-Demonstration course of S.I.E./A.I.R.
- 7 Majority of the respondents (95%) found the teacher broadcasts useful.

1.5 Need for further research

Most of the studies mentioned above reveal that there is lack of proper organisation and utilisation of the school broadcast programmes. There is a need of liaison between A.I.R. and State Departments of Education in planning the programme series, providing infrastructure of listening facilities, identifying schools with listening facilities, and getting feedback from the target schools. Most of the script writers are not trained in writing scripts. There is no proper sequence in the programmes broadcast. Objectives of the programmes are not well defined. The programmes have very limited content coverage. Hardly a few schools have made provision for radio period in the school time-table. Teachers are diffident about the role they are expected to play with the medium like radio in the classroom. Pre-, and post-broadcast activities are not conducted in most of the schools. The school broadcast programmes are not properly synchronised with the school schedules. No systematic attempts are made to get feedback from the schools. Except project schools in Jalgaon (C.E.T. 1977); Tamil Nadu (E.T. Cell 1978); Rajasthan (C.E.T. 1980); very little utilisation of the school broadcast programmes is found in other schools. However, the research evidence is not sufficient to draw any definite conclusions regarding the functioning of the school broadcast programmes.

All the studies reviewed above were not available at the time of planning the present study. Just to show the trends

of the studies in the area of the school broadcast programmes even the studies available afterwards have been reviewed. Two studies were available on the organisation of the school broadcast programmes at the Producers' end, viz., C.E.T.(1975), and Sudame et.al.(1979). Through the study conducted by C.E.T.(1975) an attempt was made to study the functioning of the school broadcast units at all India level covering nature and number of programmes; staff position and training; and co-ordination between A.I.R. and State Department of Education with respect to school broadcasts. Through the study conducted by Sudame et.al.(1979) an attempt was made to study the planning, staffing pattern and training, co-ordination between A.I.R. and various agencies, feedback, and expenditure on school broadcasts at A.I.R. Cuttack. In none of the studies mentioned above attempts were made to study the preparation and evaluation of the programme scripts. Also, no attempt was made to study the support to and from schools with respect to school broadcast, and the infrastructure developed for the utilisation of the school broadcast programmes. The different aspects of school broadcasts, such as, coverage, staffing, planning, co-ordination, feedback, training, expenditure could be studied in more depth. No comprehensive study was available covering the different aspects of school broadcasts at the producers' end at all India level.

Six studies were available on the utilisation of the school broadcast programmes, viz., C.E.T.(1975); C.E.T. (1977);

Joseph (1976); Shantha (1976); E.T. Cell Tamil Nadu (1978); and E.T. Cell Orissa(1976), conducted at Jaipur; Jalgaon; Baroda; Bangalore; Chingelput and North Arcot; and Cuttack. Puri, Ganjam, Mayurbhanj, Dhenkanal respectively. In each of the studies mentioned above attempts were made to find out the extent of utilisation of school broadcasts, and the factors facilitating and impeding the utilisation of the school broadcast programmes. The data were collected through questionnaires and interviews from the students, teachers and headmasters. In none of the studies mentioned above an attempt was made to make on the spot observations of the school broadcast programmes in the schools. Also, no attempt was made to study the comprehensibility of the school broadcast programmes. Moreover, the findings of the studies conducted on the extent of utilisation of school broadcasts in a particular State can not be generalised to the other States, because the needs and conditions vary from State to State. By now many more school broadcast units have come up in different States. It would be worthwhile to study the utilisation of the school broadcast programmes conducted by these units.

Not much is known about the roles, the different agencies play in the scheme of school broadcasts. As mentioned earlier teachers are not trained in using radio as a medium for classroom instruction. Perhaps, Colleges of Education can play an active role in providing training to the pupil-teachers in using the medium. Apart from this with the

increasing role of mass media for classroom instruction, the Colleges of Education are supposed to restructure their curriculum giving due emphasis to these media. They may also take active role in planning, production and utilisation of the school broadcast programmes. A need is felt of reorganisation and development of a proper infrastructure for the effective organisation and utilisation of the school broadcast programmes.

The points discussed above call for a series of studies of different nature focussing on the varied aspects and dimensions of the school broadcast programmes. The information obtained through such studies may lead to certain findings of practical utility for the effective conduct of the school broadcast programmes. The study under investigation is one such attempt.

1.6 The present investigation

The present investigation attempts to study the organisation and utilisation of the school broadcast programmes. The study is titled 'A Study of School Broadcasts in India'.

1.7 Objectives of the study

The study was conducted with the following objectives:

- 1 To study the functioning of the school broadcast units with respect to the following aspects of the school

broadcast programmes:-

- (a) Transmission
- (b) Planning and administration
 - (i) Staffing pattern
 - (ii) Planning
 - (iii) Co-ordination with other agencies
 - (iv) Feedback mechanism
 - (v) Training and seminars
 - (vi) Expenditure
- (c) School broadcast scripts - preparation, and evaluation.
- (d) Support to and from schools with respect to school broadcasts.

- 2 To find out the extent of utilisation of school broadcasts in the schools.
- 3 To explore the possible role of Colleges of Education in the scheme of school broadcast programmes.

1.8 Limitations of the study

The study was limited to organisation and utilisation of school broadcast programmes. The utilisation of the school broadcast programmes was studied only in the secondary schools in Haryana State.

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