

## CHAPTER VII

## SUMMARY, CONCLUSIONS AND SUGGESTIONS

## 7.0 INTRODUCTION

The educational system is instrumental to the all round development of a nation. It plays a vital role in generating qualified and trained manpower which is responsible for this development. Because of the technological advancements and changing nature of the day to day affairs, a nation cannot bank upon a static educational system. Hence, improvement in the educational system by way of continual reorganization and modification in the methods, media and techniques is called for. This can be carried out by the application of the principles, theories and laws of the physical and behavioural sciences. Application of these principles, theories and laws to make the educational process effective in terms of achievement of objectives is known as Educational Technology. Among the various uses of educational technology; radio, television, films are of importance. These gadgets are the off-springs of the physical sciences, and were mainly used for entertainment purposes. In the recent decades they have entered into the instructional process due to their advantages of wide coverage, uniformity of presentation, economy of costs etc. Programmes of radio and television are broadcast for educational purposes all over the world.

## 7.1 RADIO AS A MEDIUM OF INSTRUCTION

Radio came into picture earlier than television. It is an informal educational institution to which all, irrespective of age, sex and qualification have access. The educational planners, educational theoreticians and teachers have realized that in radio they have a teaching aid of great power. As a tool of education, its need in real classroom situations is felt by educational planners, research workers, and teachers. Through this, information of all kinds can be provided in classrooms which the teacher alone cannot. Radio can be used as one of the tools, like books, pictures, etc. in the instructional process. As a teaching aid, it is comparatively inexpensive, as such it can be within the easy reach of all types of educational institutions.

## 7.2 SCHOOL BROADCASTS THROUGH RADIO

In India, radio broadcasts commenced in the year 1927 by private agencies. Later on, they were taken over by the government and at present they are functioning in the name of "Akashvani". From 84 stations scattered over the whole country programmes are transmitted and they are received through more than twenty million radio sets by 89.35 per cent of the population of India.

Programmes for school students are broadcast from 35 stations, and 20 auxiliary stations relay these programmes

to reach students in the interior regions. Programmes are beamed under the banners of primary school broadcasts and secondary school broadcasts. Subjects covered through these programmes are Regional Languages, General Science, History, Geography, etc. Every year the government spends not less than Rs.45,000/- per station in organizing these programmes.

### 7.3 SCHOOL BROADCASTS AND A.I.R., CUTTACK

For the school students of Orissa, A.I.R., Cuttack started transmitting programmes from 24th October, 1960. The frequency of broadcasts was thrice a week for a duration of thirty minutes to begin with. At present, programmes are broadcast on each working day during the school hours in order to facilitate the children to listen in the school. For giving wide territorial coverage, programmes are relayed by the ancillary stations of Sambalpur and Jeypore. These programmes are planned in collaboration with the subject committees appointed by the Board of Secondary Education, Orissa. Every year, not less than two hundred programmes in various curricular subjects for different grades are presented. Notes for teachers, charts and pamphlets relating to the broadcast programmes are sent to schools free of cost in advance.

#### 7.3.1 Production of Programmes

The Educational Broadcast Unit of A.I.R., Cuttack invites persons from schools, colleges and university departments

to write scripts for various programmes. The programmes are recorded in the A.I.R. studio with the help of A.I.R. artists whenever necessary.

### 7.3.2 Listening in the Schools

As the programme is broadcast during the school hours, the Board of Secondary Education, Orissa, has prescribed a period in the school time table for listening to the broadcast programmes. During the broadcast period, in some schools, a transistor radio set is carried to the classroom, in others the students listen to it either in the staff common room, headmaster's office, verandah or any other place depending upon the availability of physical facilities. The teacher-in-charge is supposed to remain present for listening along with the students and perform the necessary activities.

## 7.4 SOME BASIC ISSUES

Even though programmes are prepared, broadcast and received by the audience, some basic questions remain to be answered. What is the impact of these programmes? Are the objectives behind the school broadcasts fulfilled? Does the planning at the transmitting end take proper care of the elements like adequacy of programmes, content coverage, etc.? Do they produce the programmes according to the psychological and educational background of the children? What about children's reactions? Do they enjoy the programmes? What about

teachers? How are they benefitted? There is a feeling among teachers, administrators and educational planners that the extent to which broadcast programmes are received in schools is not very encouraging. It is not because the programmes are bad; quite a few of them are good and some of the best teachers are involved in their planning and presentation. Persons involved in instruction also appreciate in theory the utility of the programmes. Random visits to schools from time to time reveal that often the set is out of order, it is locked up for safety in the headmaster's office or it is installed in the headmaster's residence. Only an extensive survey can reveal how many children actually listen and how their teachers make use of these programmes.

#### 7.5 NEED FOR RESEARCH

Any system, in terms of its attainment of pre-set objectives, should start with a research base. School broadcasts, when looked at in relation to the instructional situation, involves various components like teacher, students, instructional aids, instructional techniques, etc. To enable it to attain the desired objectives, study of the existing situation in terms of the availability of needed components, finding the gaps if any, and organizing them systematically to function meaningfully, researches are essential. Researches should go ahead with systems approach with a view to activating the total system.

## 7.6 RESEARCHES DONE ON SCHOOL BROADCASTS

Although half a century has passed since the inception of educational broadcasts in this country, sufficient researches have not been conducted for bringing an improvement in the system. The studies conducted by NCERT (1975, 1977), Joseph (1976), Shantha (1976), Mohanty and Giri (1976) and Sudame, Biswal and Sahoo (1977) have arrived at a number of findings. The following are a few important findings from these studies :

- The quality of the programmes has remained static for a long period.
- Teachers are not given special training and instruction regarding the use of radio lessons.
- Students like to listen to the radio lessons and they are aware of its usefulness.
- Teachers in general are found to be ready to utilise a part of their time in the school for radio lessons.
- There is a need for having pre and post broadcast activities for supplementing the radio lessons.
- Most of the programmes have contributed to the development of knowledge both of teachers as well as students.

- The A.I.R. has the liberty to broadcast to schools without being adequately and continuously guided in this respect by a well represented body of the education department.
- The A.I.R. does not get feedback of the utilization of school broadcasts and reaction of the audience towards these.
- Among the various reasons for under utilization of radio lessons, lack of a firm policy and emphasis by the educational authorities on school broadcasts emerged to be the most predominant one in the minds of the heads of the schools.
- The teachers recognize the potentials of school broadcasts in giving better and new information to the students. But at the same time they believed that radio lessons were not complete in themselves and these were not presented in an interesting and effective manner.
- Problem of synchronisation of radio lessons with the sequence of teaching in the class, lack of provision for the radio lesson in the time-table, poor reception of radio sets, lack of separate radio rooms, etc. are some of the limitations in the way of a fuller utilisation of the school broadcasts.

- The educational broadcast unit is poorly staffed in terms of the amount of work needed to be done.

While writing this report, the investigator has come across a recent report of the study conducted by NCERT (1980) on the school broadcasts in Delhi. Some of its findings are given below :

- For preparation of scripts, Akashvani depends upon outside resource persons including teachers. Script writers were not briefed about objectives and scope of lessons; only titles were indicated. This allows a great deal of subjectivity in preparing scripts, particularly in emphasising various learning points in a lesson.
- The Directorate of Education and the Akashvani did little in training script writers for school broadcasts. Training for user teachers was also a neglected area.
- As a rule, Akashvani did not preserve recordings of school broadcast programmes. These were produced afresh every year amounting to wastage of earlier efforts.
- About 12 per cent schools of the total sample and 14 per cent of schools having radio sets made any

use of radio programmes. All programmes were not utilized equally.

- There was little evidence of pre-broadcast discussions conducted by the teachers. Post-broadcast discussions were held in 56 per cent of listening schools only.
  
- Students' initial level of achievement in respect of five programmes tested for their understandability was 32 to 42 per cent 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 per cent.

All these research findings show that this programme has not been popularized and sufficient attention has not been drawn towards the educational value of this medium. The possibility of radio as an agency of education has only been touched so far in India. So its place and role in the instructional process are yet to be searched.

#### 7.7 THE PRESENT STUDY

Considering the findings of the researches conducted in the field, it is felt that these studies have only gathered information regarding the organizational structure at the transmitting end and the state of utilisation of SBP at the

receiving end. Each of these studies has attempted to find out the causes of poor functioning and non-utilisation of the programmes. But attempts to bring solution to the problems are missing in all of them. There is a wide gap between the transmitting end and the receiving end of SBP. The present study is aimed at bridging the gap between the two ends by bringing new elements and connecting them meaningfully. Hence, it was thought to study the present position of secondary school broadcast programmes both at the transmitting end and receiving end in detail, and to find out various possibilities for their enrichment by organizing supplementary activities.

Rationale : SBP, being an instructional setting in a wider instructional process requires continuous interaction with the learners for getting the optimum learning outcome. Radio, having one way communication mechanism, does not possess the built-in mechanism for creating interactional situations. So on the spot mechanisms are to be brought in for creating interactional situations with a view to attain the instructional objectives. By bringing additional elements and connecting them with SBP, instructional activities can be geared to attainment of objectives. Since SBP of twenty minutes duration has a place in a fortyfive minutes period in the school time-table, it is possible to organize pre-broadcast, broadcast and post-broadcast activities. Pre-broadcast activities may arouse interest and bring readiness in the minds of the

students to receive the broadcasts. Activities like viewing at the time of listening and writing the key points coming through the broadcast may help sustain the attention throughout the programme. Further activities in the post-broadcast session may also recapitulate the communicated facts and ideas in the minds of the students. Hence, it is expected that this cumulative effort of the activities which may be the components of an alternative instructional strategy in different sessions of the broadcast would influence the achievement of the students.

Hence, the investigator aimed at examining the present position of SBP functioning at the secondary school level, to develop instructional strategies for their effective utilization and to determine the effectiveness of the strategies in terms of the students' achievement.

The title of the study is :

"DEVELOPING STRATEGIES FOR EFFECTIVE UTILIZATION  
OF SCHOOL BROADCAST PROGRAMMES IN ORISSA STATE".

#### 7.7.1 Objectives of the Study

1. To study the school broadcast programmes in terms of the following :

- (a) Instructional objectives,
- (b) number of programmes broadcast,
- (c) content coverage,

- (d) script writing and
- (e) quality of the programmes.

2. (A) To study in general the facilities provided by the high schools of Orissa for the use of school broadcast programmes.

(B) To study in particular :

- (i) the facilities available and the arrangements made for the reception of SBP in the schools making use of it
- (ii) use of SBP in classroom situations and
- (iii) reactions of students towards SBP.

3. To develop and try out instructional strategies for the effective utilization of school broadcast programmes by :

- (a) developing instructional materials such as visuals and supporting work books, to be used during the broadcast.
- (b) developing instructional activities like discussion, guest talks, role playing, quizzes, field trips, note taking, assignments etc. for pre-broadcast, during broadcast and post-broadcast activities.
- (c) integrating the elements described in (a) and (b) above with SBP.

4. (A) To compare the effectiveness of the developed instructional strategies with the radio broadcast alone, experimentally in terms of students' achievement on criterion tests.

(B) To study the reactions of (i) students towards the strategies and (ii) teachers towards the implementation of the strategies.

5. To study the feasibility of the strategies in terms of time, schedule and cost.

#### 7.7.2 The Hypothesis

The following hypothesis pertaining to objective No.4 was formulated :

Students undergoing the developed strategies will perform better than those who undergo the school broadcast programmes alone, on the criterion tests given.

#### 7.7.3 Methodology

As proposed, the study was conducted in two phases. In the first phase, the survey of the status of the school broadcast programmes, the development, try out and modification of the instructional materials and instructional activities were done, whereas in the second phase, the effectiveness of the strategies developed in phase 1, was studied through an

experiment in terms of students achievement on criterion tests and their reactions towards the strategies, by taking two groups of students each from urban and rural settings. The achievement of students undergoing the strategies were compared with that of the students undergoing radio broadcast alone.

#### 7.7.4 Instrumentaion

For Objective 1 : Data in respect of sub-objectives (a), (b), (c) and (e) were to be collected from official records. So no instrument was necessary. But for studying the sub-objective (d), a questionnaire for the experts was developed by the investigator.

For Objective 2 : Four questionnaires - two for the headmasters and one each for the teachers and students were prepared by the investigator.

For Objective 3 : (1) Instructional materials like slides and radio support work books were developed after identifying the concepts by analysing the scripts and transcripts of SBP in terms of behavioural objectives.

(2) Instructional activities like guest talks, role playing, quiz, field trip, team teaching, discussion, etc. for three sessions viz. pre-broadcast, broadcast and post-broadcast were planned in consultation with the subject teachers.

(3) Criterion tests for each of the lessons were developed in terms of the behavioural objectives.

For Objective 4 : (1) Modified form of the criterion tests developed for objective 3 was used to measure the students' achievements.

(2) A questionnaire covering all the aspects of the strategies was developed to study the reactions of the students towards the strategies.

(3) An unstructured interview was planned to study the reactions of teachers towards the implementation of the strategies.

For Objective 5 : A proforma was prepared to record information regarding the actual expenditure on different aspects of strategy development and the time spent.

#### 7.7.6 Sample

The A.I.R., Cuttack and the schools listening to the broadcast programmes were the samples of the study. Following are the samples taken in respect of each of the objectives and their sub-objectives.

For Objective 1 (a) : Pamphlets of SBP for the years 1975-76 to 1979-80 (5 years).

For Objective 1 (b): Programme charts of SBP for the year 1975-76 to 1979-80 (5 years).

For Objective 1 (c): All the programmes of SBP presented in the year 1978-79 for Grade VII.

For Objective 1 (d): All the 70 experts registered by the A.I.R. for production of SBP during the session 1978-79.

For Objective 1 (e): All the scripts and their transcripts of SBP presented for Grade VII in the 1st term of 1978-79 academic session.

For Objective 2 (a): All 2031 high schools of Orissa covering the listening population of AIR, Cuttack and the relaying stations of Sambalpur and Jeypore.

For Objective 2 (b):

(i) All 94 headmasters of the schools listening to SBP in real classroom situation.

(ii) One hundred twenty teachers involved in the use of SBP in these 94 schools.

(iii) Five hundred students from the locality of Cuttack and Bhubaneshwar listening to SBP.

For Objective 3 :

(i) All the scripts and their transcripts broadcast for Grade VII on History, Geography, General Science and Oriya in the 1st term of the academic session 1978-79.

(ii) One group of students of Grade VII of Secondary Board High School, Cuttack enrolled in the session 1978-79.

For Objective 4 :

(i) Two groups of students of Grade VII each from Salipur High School (Rural) and O.T.M. High School, Choudwar (Urban), enrolled in the session 1979-80.

(ii) Four teachers from O.T.M. High School and an equal number of teachers from Salipur High School involved in the use of the developed strategies for SBP.

For Objective 5 : Cost and time involved in development of the instructional strategies of 16 SBPs taken for the study.

7.7.6 Collection of Data

For Objective 1 : To study objective 1, data were collected from the A.I.R., Cuttack by paying personal visits to the educational broadcasting unit and the individual experts.

For Objective 2 : All the data in respect of objective 2 except that from students were collected through mail. From students data were collected by meeting them in groups.

For Objective 3 : Development of instructional strategies and their tryouts were a continuous process for a period of six months beginning from July 1978. The scripts and transcripts of SBP were collected every week, instructional strategies were developed and tried out on the students of Grade VII of Secondary Board High School. The criterion test was administered on the day following the broadcast and achievement scores collected. Regular feedback was received from the teachers, students and other observers on different aspects of the strategies.

The criterion test results and the feedback recorded were analysed and the materials were modified on the basis of the experience gained. Finally, they were kept ready for the experiment to commence in the next academic session i.e. 1979-80.

For Objective 4 (a) : Data for this objective were collected through an experiment conducted in urban and rural situations separately. The experiment was conducted with the following design. Two groups of students termed as experimental

Group I and experimental Group II were taken as the subjects of the experiment. For the first experiment, the experimental Group I learnt through the developed instructional strategy (Treatment 1) and experimental Group II through radio broadcast alone (Treatment 2). The groups were given alternate treatments for the successive lessons. The criterion test was administered each time on the day following the broadcast. Subject teachers, specially trained in the use of the instructional strategies were involved in conducting the experiment.

For Objective 4 (b) : (i) The questionnaire developed for getting the reactions of the students towards the strategies, was administered to them in groups and the data were collected.

(ii) An unstructured interview was conducted on all the subject teachers who were involved in the experiment.

For objective 5 : The time, schedule and cost involved in the development and use of the instructional strategies were recorded in the proforma prepared.

#### 7.7.7 Analysis and Interpretation

For Objective 1 : Data collected for sub-objectives 1 (a), 1 (b), 1 (c) and 1 (e) were analysed qualitatively whereas data collected for 1 (d) were analysed in terms of the percentage of responses.

For Objective 2 : Data collected from the headmasters, teachers and students were also analysed by finding out the percentage of responses.

For Objective 3 : Scores of students' achievement were studied in terms of Mean and SD.

For Objective 4 (a) : The achievement scores of the students of Experiment I and Experiment II were analysed by applying the technique of Analysis of Variance.

For Objective 4 (b) : The reactions of the students and teachers collected through the questionnaire and interview respectively were analysed qualitatively.

For Objective 5 : The additional cost of the instructional strategies for a single SBP were calculated and the feasibility of the approach was studied in terms of the time needed for utilization of the strategies and its inclusion in the school time-table.

#### 7.7.8 Findings

##### In Respect of Objective 1

- Objectives of different subjects of the SBP have remained the same throughout the academic years 1975-76 to 1979-80.

- Objectives of Sanskrit programmes have not been stated at all.
- Objectives of the instructional programmes through radio were not presented in specific forms. Those presented were of general in nature.
- Objectives like development of correct writing, creativity etc. seem to be difficult to achieve through the medium of radio which is one way in communication.
- The number of programmes broadcast for any particular grade over an academic year was quite inadequate to cover the syllabus.
- No planned approach was made to select the number of programmes.
- Subjects like Mathematics, Physiology & Hygiene, Agricultural Sciences were totally neglected.
- Grade X did not have any programme in the system.
- In Grade VII, the content coverages in respect of History, Geography, General Science, Oriya, English and Sanskrit were around 30 per cent, 29 per cent, 35 per cent, 18 per cent, 8 per cent and 7 per cent respectively.

- None of the experts were given training on writing of scripts for radio lessons. Most of them have reported that they usually write the scripts in the form of discussion and question answers.
- Ninetythree per cent of the experts have responded that they were asked to write on the topics which the producer wanted.
- Almost all the experts desired to get remuneration at an increased rate.
- About 60 per cent of the experts felt that teachers do not know how to use SBP in the classrooms. They felt that the teachers should be trained in the utilization of SBP.
- In most of the programmes (80 per cent) teaching was organized in a simulated classroom situation with a teacher and two or three students participating in a discussion.
- Sufficient stress has not been given to clarification of concepts by way of giving illustrations.
- A few programmes had appropriate sound effects. In other programmes, even though there was sufficient scope for giving sound effects, they were not given

due consideration due to which the overall quality of the programmes appeared to suffer.

- Due to lack of novelty, the programmes were not interesting.
- Although clarity of speech was found to exist in a majority of the programmes, people were selected irrespective of their quality of voice and accent.
- In almost all the programmes the logical sequence was maintained.
- In many cases the bookish language has been noted in the scripts.
- Although validity of the content has been maintained in most of the scripts, very serious mistakes were found to exist in some of them.

#### In Respect of Objective 2

- Among the respondents, 62 per cent of the schools have been found not using the SBP.
- Absence of a radio set figured as the most frequently mentioned reason for non-utilization.
- Of the schools using SBP, 46 per cent conducted the programmes in the classroom whereas in the majority

of schools, students listened to the programmes in places like verandah, staff common room, headmaster's office, drama pandal and under the trees.

- Of the schools conducting SBP in the classrooms, 78 per cent had included it in the time-table.
- Although most of the schools were in receipt of charts and pamphlets from A.I.R., only 8 per cent had Planning Committees and only 18 per cent of the headmasters reported to have sent evaluation reports to the A.I.R.
- Only one school has reported to have had budget provision for SBP.
- Necessity of teachers' training on broadcast use was felt by almost all the headmasters.
- Ninety three per cent of the teachers have reported that they got encouragement from their administrators for effective utilization of SBP.
- Although 95 per cent of the teachers reported that they had not received any training on the utilization of SBP, about 3/4th expressed the necessity of having such training.

- Eighty eight per cent of the teachers reported to have allowed the children to take notes during listening, although it has been specified by the A.I.R. not to do so. Twenty five per cent of the teachers gave home assignment to the students on SBP.
- Seventy three per cent of the teachers desired for more time for SBP utilization.
- Eighty five per cent of the teachers indicated the necessity of special radio work-books for the students.
- Forty three per cent of the teachers reported that the coverage of syllabus through SBP was less than 25 per cent. Of the teachers, 50 per cent and 31 per cent rated SBP as good and moderate respectively.
- Eighty two per cent of the teachers reported that "English by Radio" programmes prepared by Central Institute of English and Foreign Languages (CIEFL), Hyderabad were difficult for the students to understand .
- Almost all the students who responded, had interest in listening to SBP. Sixty two per cent of them felt that it helped them for better understanding of the subject matter.

- Only 13 per cent/ <sup>of the students</sup> reported that their teachers conducted pre-broadcast and post-broadcast activities whereas about 3/4th felt the necessity of having such activities.
- Nearly half of the students responded, expressed the desire to have SBP every day.

#### In Respect of Objective 3

Out of sixteen programmes, students' achievement in terms of percentages of scores was seen to be above 70 per cent in four cases, above 60 per cent in ten cases and in the rest two above 56 per cent.

#### In Respect of Objective 4

- The strategies developed for effective utilization of school broadcast programmes were significantly effective when compared to radio broadcast alone in terms of students' achievement both in urban and rural schools.
- The strategies developed for effective utilization of School Broadcast Programmes were found to be effective in terms of students reactions towards them.

- Teachers who utilized the developed strategies were in favour of implementation of the strategies in a large scale.

#### In Respect of Objective 5

The strategies developed for effective utilization of School Broadcast Programmes seem to be feasible for use in large scale in terms of time, schedule and additional cost involved.

#### 7.8 CONCLUSIONS

The School Broadcast Programmes can be looked at from two ends, i.e. transmitting end and receiving end. Study of the transmitting end prompts the investigator to guess that school broadcast programmes were not started out of the felt needs of the consumers. Like other programmes, viz., music, drama, news, farmers' forum, etc., it was an addition of one more programme in the list of A.I.R. Perhaps it has started as such and the schools were told "Here is a programme for you". A study of the objectives show that there is no speciality in the statement of objectives of school broadcast programmes where radio can play a role which other media cannot. All these objectives appear to have been borrowed from the formal educational system. Even, some of the objectives stated are very difficult to be achieved through radio instruction programmes. Study of the number of

programmes broadcast and the content coverage, shows that considerable thought has not been given to the adequacy of programmes and the amount of syllabus coverage, which indicates that the transmitting end lacks in effective planning and meaningful organization. The study reveals that the programmes fail to attract the consumers for its use. At the same time, the effort for motivating the clientele for listening to the programmes seems to be absent in the net-work. The most startling finding is involvement of persons in writing radio scripts who were not given training in that aspect. How can interesting programmes be expected without proper expertise? Quality of the programmes does not appear to be attractive for young children. It is not that because programmes are produced, the schools will listen to them. Production of programmes of good quality based on psychological background of the listeners and relevant to the day-to-day teaching-learning process can only attract the schools to utilize them.

The study of the receiving end gives disappointing findings in terms of the use of the school broadcast programmes. A large section of the schools (62 per cent) have been found not using the programmes at all. This indicates that proper coordination between the schools and the A.I.R., Cuttack does not exist. Perhaps, it is the feeling among the headmasters and teachers that the SBP is the main concern of A.I.R. They fail to perceive what additional role the radio can play in

helping the students to secure more marks in the examination. Absence of a radio set has figured as the most frequently mentioned reason for non-utilization. Purchase of a medium wave radio set on the part of a school may not be difficult. Only willingness on the part of the headmasters is necessary. Even in the schools where there are radio sets, lack of teachers' training, lack of instructions from higher authorities and unsuitability of programme timing, come in the way of utilization of SBP. The schools where SBP is in use, lack of physical facilities does not enable the schools to utilize programmes in an effective manner.

#### 7.9 SUGGESTIONS FOR IMPROVEMENT

The investigator wishes to put forward the following suggestions for the improvement of radio instruction programmes.

First, if the SBP is considered to be improved within the existing infra-structure, formulation of attainable objectives at the transmitting end would be the primary concern of the system. For this, needs of the receiving end need to be surveyed in order to identify the instructional situations where radio can play a legitimate role. There may be a situation where teachers have difficulty in teaching. For example, while teaching about birds and animals of different parts of the world, the teacher may be able to show pictures.

of different kinds of birds and animals but it is difficult on his part to bring the real sound effects of those birds and animals to the classroom. Here radio can play a significant role not only in bringing a mental picture of the things among the students but also in establishing the facts and ideas in the minds of the learners as well. After identifying similar situations like this, clear cut objectives should be framed and decision should be taken about the number of programmes to be broadcast and hierarchy of importance to be given to the programmes of different grades and subjects. For producing programmes of good quality, expertise should be developed according to the need of the programmes to be broadcast. In connection with the utilization of the programmes in schools, the investigator feels that mere listening is not enough. As it has been revealed through this study that listening alongwith supplementary activities is more effective in comparison with listening alone, care should be taken to organize meaningful activities in the schools. Before doing that, it should be ensured that the school has adequate physical facilities for use of the programmes. There should be a broadcast planning committee in each school which should look after the use of programmes. Training of teachers for broadcast use is the most important aspect of the receiving end. Institutions like Educational Technology Cell of the Education Department of the Government of Orissa should be entrusted with the responsibility of holding inservice training programmes, workshops, seminars,

etc. in connection with school broadcast programmes. The investigator feels this institution (Educational Technology Cell) would be the proper body to keep liaison between the transmitting end and the receiving end.

The second approach, the investigator would like to suggest, is on the basis of the experimental findings of this study. The strategies developed for effective utilization of school broadcast programmes have proved to be effective both in urban and rural schools where the experiments were conducted. It shows that this new way of utilization of SBP influences the learning of students. The teachers involved in the utilization of the strategies have found them useful and opine for the implementation of the strategies on a large scale. If it is to be implemented problems may arise at A.I.R. with the existing limited staff, in developing the strategies for individual programmes, preparing the learning packages and supplying them to schools. To avoid this problem and ensure for effective utilization of SBP, the investigator suggests the establishment of a School Broadcasting Council. This should be an independent centralized body free from departmental constraints. This Council should comprise A.I.R. experts, Educational planners, administrators, practitioners and research workers. The Council may have different sub-councils (subject committees). The group of persons in the sub-council should be responsible for a particular subject for a series of programmes. They should

select topics, write or scrutinize scripts (written by experts) and prepare the transcripts with the help of the producer and other technical experts. These programmes should be tried out on a small sample and modified on the basis of the feedback received from the clientele. Decision about the number of programmes to be broadcast for different grades and different subjects should be taken by the Council on the basis of the survey of the needs of students. The sub-councils may develop the strategies and prepare learning packages alongwith the visuals. They may be given remuneration the way the experts are getting from A.I.R. at present.

The Council should have the facility of a library. Also there should be a Liaison Officer to keep contact with the schools and the Education Department of the State Government. Besides the production of programmes the Council would organize training programmes (for broadcast user teachers and script writers), workshops, seminars, conferences, competitions, etc. In this respect collaboration with the Educational Technology Cell, and Extension Services Department of the State Government would be more useful. Regular evaluation by the Audience Research Unit of the A.I.R. would help to revitalize the planning and organization of programmes at the transmitting end and improve their use at the receiving end.

Through continuous efforts of the educational planners, administrators and practitioners, school broadcasts can

be activated and can play their due role in the total educational system which has a key function in the development of a nation.

#### 7.10 SUGGESTIONS FOR FURTHER RESEARCH

In view of the research and development in the area of educational broadcasting, the investigator intends to put forth the trend of research emerged out of the present study. Through this study strategies were developed on the programmes for which scripts were written by others. Now the immediate need is to develop school broadcast programmes alongwith their strategies for effective utilization and study their effectiveness in various classroom situations. This may show the way to utilize the school broadcast programmes in a more effective way. Secondly, the strategies developed through this study had radio vision as one of the components by using projected visuals. All the schools in the state may not have the facilities for using projected visuals. As it was been suggested earlier to use non-projected visuals instead of projected visuals, there is a need to see experimentally which would work better. Hence, a study of the effectiveness of radio-vision (projected) in comparison to radio-vision (non-projected) is called for. Third, in whatever way the programme may be designed, for its utilization in schools, the teachers need to be trained. Through this study it has been found that the headmasters, teachers and

the experts concerned with school broadcast programmes feel the necessity of having such training. So the development of a multimedia training programme for teachers for effective utilization of school broadcasts is one of the immediate needs. Fourthly, it is also essential to investigate into the economic aspect of the school broadcasts. The benefit coming out of it should be analysed in terms of the cost involved.

Researches should not be confined to these studies only. Studies on other educational broadcasts like Teachers' Broadcasts, Primary School Broadcasts, Broadcasts for Adult Learners etc. should be taken up for bringing improvement in the wider educational system.

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