CHAPTER VI

STUDY OF THE FEASIBILITY OF THE STRATEGIES

6.0 INTRODUCTION

This chapter presents the study of the feasibility of the instructional strategies developed and effectiveness studied as described in the previous chapters. The objective already stated in Chapter I reads as follows:

To study the feasibility of the strategies in terms of:

(i) time,
(ii) schedule and
(iii) cost.

It was thought necessary to study the feasibility of the strategies on these three aspects because they are directly connected with the radio instructional system. It was thought to find out the adequacy of the time needed for development of strategy in terms of the actual use of programmes in the schools, the usability of the strategies tied with the regular schedule of schools and the feasibility in terms of cost. In addition, it was thought to be worthwhile to study the additional cost that is to be incurred in the event of the implementation of the strategies.

Considering these viewpoints, the aforesaid objective
was formulated. The methodological details and the outcomes of the study of the said objective is presented below:

6.1 INSTRUMENTATION

To record information regarding the actual amount of time spent in developing and trying out the strategies a proforma was prepared through which the amount of time spent for developing instructional materials like criterion tests, learning experiences, pictures, slides, material for the orientation to teachers, etc. were recorded. (Appendix-XI)

6.2 SAMPLE

(i) All the 16 school broadcast programme packages developed according to objective-3 were considered for calculation of time utilised and cost involved for their development.

(ii) All the 2031 high schools of Orissa, were taken for the calculation of the expected additional cost for developing strategies for a single school broadcast.

6.3 COLLECTION OF DATA

Data in respect of time spent on the development and tryout of the strategies were recorded by the investigator in
the proforma developed. For this, the artist, photographer and the person involved in duplicating the materials were contacted. This was done in the developmental stage of the strategies. Data in respect of the cost of the instructional materials developed were also recorded from time to time.

6.4 ANALYSIS AND INTERPRETATION

Data collected were analysed according to sub-objectives in a descriptive manner and interpretations given.

6.4.1 Study of Time

This has been studied by taking into consideration the man-hours spent on an average for development of the strategy for one SEP. The following table shows the amount of time spent in each aspect of the strategy development.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Items</th>
<th>Time Spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Getting the scripts and transcripts</td>
<td>Two man hours</td>
</tr>
<tr>
<td>2</td>
<td>Developing materials like criterion test and learning experiences</td>
<td>Twenty man hours</td>
</tr>
<tr>
<td>3</td>
<td>Collection and drawing of pictures</td>
<td>Seventytwo man hours</td>
</tr>
<tr>
<td>4</td>
<td>Development of slides</td>
<td>Fortyeight man hours</td>
</tr>
<tr>
<td>5</td>
<td>Duplicating test materials</td>
<td>Eight man hours</td>
</tr>
<tr>
<td>6</td>
<td>Orientation to teachers</td>
<td>Two man hours</td>
</tr>
<tr>
<td>7</td>
<td>Administration of the criterion test</td>
<td>One man hour</td>
</tr>
<tr>
<td>8</td>
<td>Scoring the test</td>
<td>Eight man hours</td>
</tr>
</tbody>
</table>

Time utilised for administration of the strategy was not taken into consideration as definite time is already provided in
the time-table.

Amount of time can be viewed from two angles—
(a) time needed for development of materials at the transmitting end, (b) use of the strategies at the receiving end.

From Table 6.1, it can be seen that for development of the strategy and preparation of all the materials needed for one SBP, 161 man-hours time was needed on an average. Usually the A.I.R. receives the scripts from experts at least a fortnight before the date of broadcast. If strategies are to be developed on the lines of this study, this period will be enough for developing the slides and test materials for a single SBP. But for a large number of SBPs (which would come every day), this time gap will not be sufficient for developing the materials and supplying them to schools. For this, the scripts should be procured at least one month in advance and the strategies developed along with the materials and sent to schools for use. Teachers for the use of SBP in classroom situation, may require two hours time to get acquainted with the strategy and use it in the classroom. In this way, mailing of materials to schools will be a continuous process throughout the year. So this does not appear to be an effective approach. The ideal situation can be, if all the programmes could be prepared at a time before the beginning of an academic year or term and the strategies developed. In that case, commissioning a group of experts together to be responsible for preparation of all the programmes
in respect of a particular subject for the whole year or term may be an advantage. Before the beginning of the academic year, the group may select the topics, write the scripts and prepare the transcripts according to their convenience. For the development of strategies the same group may be entrusted with. By involving additional persons more work can be done in less number of man-hours. For example, for getting the pictures required for preparation of slides, two or more artists can be engaged. In this connection, the vacation period at the end of each academic year may be utilized for planning and preparation of programmes and development of strategies for their use. Programmes are not usually broadcast during the vacation. If all the programmes for the whole year are kept ready by the producer during this period it will be more advantageous for mailing the materials to schools once in a year than sending them at regular intervals. By doing so, the workload of the producer can be reduced in the subsequent days. Also the teachers in the schools would get enough time for classroom preparation.

Coming to the use of the strategies at the receiving end, it can be commented that the use of the materials for students in the classroom totally depends upon the headmaster and teachers of the schools. Like a group of experts at the transmitting end, there should be a group of teachers in every school responsible for the use of these programmes.

It has been found through the study of objective-2 that
a few schools have broadcast planning committees. Broadcast Planning Committees should be instituted in all the schools under the leadership of the headmaster. The Committee can plan necessary activities during the time available at their disposal. After receiving the materials from A.I.R., if necessary, the same should be presented before the committee or directly given to the concerned teachers for use.

6.4.2 Study of the Schedule

This has been studied by taking the school time-table into consideration. The schools in Orissa have the duration of periods ranging from 35 minutes to 45 minutes depending upon the local conditions. The SBP broadcast by the A.I.R., Cuttack, covers only 20 minutes of a classroom period. During the rest of the time, the teacher is expected to conduct activities in connection with the programmes broadcast. In Chapter III, it has been reported that the organization of the activities are not given proper attention. However, on the spot investigation will show how these programmes are fitted into the school time-table and in what manner the teachers conduct the necessary activities.

The instructional strategies developed in Chapter IV were fitted into the school time-table in the schools where the experiments were conducted. It was tried to study the feasibility of maintaining them in the instructional process for a complete academic term without disturbing the normal time-table. It was observed that neither the headmaster nor the teachers and their
routine activities faced any difficulty in adopting the strategies in their schools. With a little adjustment, the teachers themselves could conduct the pre-broadcast, broadcast and post-broadcast activities in their schools. In the previous chapter, it has been described how the teachers have reacted towards the new way of using the broadcast programmes in their schools. This is a positive sign for implementing the developed strategies in the larger set up of school education. But, in future, the problem may occur in adjusting the broadcast time with the school time and the amount of time required for one SBP use. It has been seen that the strategy worked effectively along with the pre-broadcast and post-broadcast activities. If a 35 minute time period is allotted to the broadcast period, it may not be possible to bring the desired learning outcomes where the activities in the post-broadcast session may have to be limited due to lack of time. Here, the suggestions given by the headmasters, teachers and students in Chapter III may be referred. All of them desire to have more time for broadcast period in order to facilitate the pre-broadcast, broadcast and post-broadcast activities. Considering the time available, it can be suggested that the SBP can have a session of two consecutive periods to give sufficient scope to the concerned subject teachers to conduct the necessary activities in their respective classes. As it was seen the schedule of the school time table could easily accommodates the strategy for effectively utilizing the SBP,
in future, problem may not arise for fitting the strategy into the time-table of any school running through the usual time i.e. 10 A.M. to 4 P.M. But for the schools running in different shifts adjustment of SBP in all the shifts will be a problem. A few headmasters of the schools running in shifts have reported that use of SBP is not possible on their part only because of the classes being held in shifts. In this connection, possession of a tape recorder by those schools will have an advantage for using SBPs. Once a programme is recorded during transmission, the teachers can utilize them at their convenience without disturbing the schedule. It has been found through the study of objective-2 that most of the teachers need a tape recorder for better utilization of SBP. If schools can afford it, they can record a number of programmes. These programmes can be utilized through the strategies at the convenience of the learners. SBP (programme) banks can be opened and the programmes therein can be utilized at any time for any class depending upon their need. All the schools may not be able to do this. In this case, agencies like State Council of Educational Research & Training (SCERT), Extension Services Department, Educational Technology Cell, etc. can open SBP banks of their own and loan programmes to schools.

It has been reported by many headmasters and teachers (Chapter III) that the scheduling of broadcast programme does not synchronize with the teaching schedule. From his experience,
the investigator knows that various teaching schemes are designed by different organizations like Board of Secondary Education, Orissa Secondary School Teachers' Association, Chhatra Sathi, etc. Some schools choose any one of these schemes and a few prepare their own schemes for use. As different schools follow different schemes, it would be impossible for all the schools to utilise the SBPs according to their own scheme. So there is a necessity of having a common teaching scheme followed by all the schools and the A.I.R. Since Board of Secondary Education is the central body having connection with all the schools and the A.I.R., it should see that the scheme prepared by it is followed everywhere.

6.4.3 Study of the Cost Involved

For development of learning materials, an artist, a photographer and a person for typing, duplicating and arranging the materials were involved. The services of these persons were taken on contract basis. Only the amount of money spent by the investigator for the development of strategies are reported here. Other aspects like developing cost, cost of the broadcasts, hire of projector, cost of power consumed, etc. are not taken into consideration. This is only the additional cost the investigator incurred for conducting the experiment. Costs involved on the concerned aspects of strategy development are given in Table 6.2.
Table 6.2

Expenditure Incurred for the Development of Strategies

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Items</th>
<th>Cost Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cost of the materials for the slides and remuneration to the photographer @ Rs. 4.00/slide</td>
<td>154 x 4.00 = 616.00</td>
</tr>
<tr>
<td>2</td>
<td>Purchase of readymade slides @ Rs. 3.75</td>
<td>9 x 3.75 = 33.75</td>
</tr>
<tr>
<td>3</td>
<td>Remuneration to the artist (at a flat rate for 86 pictures)</td>
<td>300.00</td>
</tr>
<tr>
<td>4</td>
<td>Cost of paper (used for preparing test materials)</td>
<td>690.00</td>
</tr>
<tr>
<td>5</td>
<td>Duplicating cost (at a flat rate)</td>
<td>250.00</td>
</tr>
<tr>
<td>6</td>
<td>Miscellaneous Expenses</td>
<td>200.00</td>
</tr>
</tbody>
</table>

Total Rs. 2089.75

No. of programmes on which strategies were developed: 16
Cost involved in the development of strategies Rs. 2089.75
for one programme $\frac{2089.75}{16} = 130.61$

These expenses could have been cut down had there been readymade slides available. Cost of development of slides could have been lower if it was done through some private or government agency preparing slides. As there was no such facility in the city of Cuttack where the materials were developed, this was done with the help of a private photographer. Coming to the remuneration to the artist, had there been readymade pictures available for all the slides, this expense could have been avoided. Out of 154 slides developed, 68 pictures were searched from
different books, encyclopaedias and magazines. The rest were drawn by the artist. Also towards the end of the process, the photographer could develop the expertise of getting slides from very small size (passport size) pictures. If this could have been identified earlier, the amount of labour on the part of the artist and the expenditure therein could have been reduced further.

Study of this aspect of the strategy has given rise to certain insights which may help in future in developing materials at lower costs. Given below is the calculation of the probable expenses expected for getting programme packages on each school broadcast programme in case the strategy is implemented.

Feasibility of the Strategies in Terms of Cost

Feasibility of the strategies in terms of expected additional cost has been studied for two ends i.e. (i) expenses expected for development of materials at the transmitting end and (ii) expenses to be incurred for use of materials in the schools.

There are 2031 high schools in Orissa. If all the schools are considered for use of school broadcast programmes through this strategy, the materials for each programme have to be prepared for all the schools. So the expected
additional cost for each SBP has to be calculated in terms of the number of schools. Here the cost of some other aspects which has not been calculated in the present study will come into the picture. For example, the cost involved for development of strategy has not been calculated in the present study as the investigator himself did so. When strategies will be developed for a number of programmes, persons for development of strategies are either to be appointed or commissioned by the A.I.R. This will be additional to the A.I.R.'s programme development. As in case of script writers (experts) the A.I.R. pays remuneration ranging from Rs.40.00 to Rs. 90.00 per programme so also in this case the same procedure can be followed. For development of slides appointment of full time artists and photographers or getting the work done on contract basis may be possible. Slides if prepared through approved government or private agencies would cost less. The investigator by contacting some private agencies have come to know that the cost of production for 1000 slides will be Rs.3000.00. It has also been found out that the artists will charge remunerations up to the tune of Rs.3/- for drawing one picture of post-card size. Amount will be still less in case of passport size pictures. In some cases, passport size photos may not show details of the figures. In those cases, only bigger size pictures may be obtained which may cost a little more. In this study, on an average, 11 slides were used for one programme. If this number comes as average for
future programmes, for each SBP 2031 x 11 = 22,341 copies of 11 slides are to be developed by duplicating them. Written materials concerning the strategy are to be printed for supplying them to all schools. The number of printed pages per SBP may come around eight. Only the learning experiences and the test items will be given. Depending upon the amount of matter, it may vary. What ever the case may be, it will not go beyond eight printed pages of quarter size. In the city of Cuttack the printing cost per page of this size comes around Rs.15/- per thousand copies in private printing presses. So the cost of printing for materials of eight pages up to three thousand copies will come up to Rs.15/- x 8 x 3 = Rs.360/-. The cost of paper according to current market price would be approximately Rs.600/-. Given below is the consolidated list of the expenses to be incurred in the event of the implementation of the strategies developed through this study:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remuneration to the strategy developer</td>
<td>65.00</td>
</tr>
<tr>
<td>(average rate)</td>
<td></td>
</tr>
<tr>
<td>Remuneration to the artist</td>
<td>33.00</td>
</tr>
<tr>
<td>Cost of slides for one SBP</td>
<td>67,023.00</td>
</tr>
<tr>
<td>Cost of written materials to schools</td>
<td>960.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>68,021.00</strong></td>
</tr>
</tbody>
</table>

Number of schools 2031

Cost of one SBP for one school = Rs.33.50

This cost can still be reduced if non-projected pictures are used instead of projected slides. A non-projected picture of
poster size (3' x 2') costs around Rs.2.00 in the market. If they are printed on large scale the cost of these posters can be brought down to a considerable extent. The A.I.R. use to get printed all the materials concerning SBP through the Orissa Government Press. If this practice continues, the expenses towards printing of materials in connection with the strategies may further come down.

The schools using SBP will have to go for some additional expenses, if this strategy is implemented. Among the equipment, possession of a slide projector on the part of a school will be a basic need if slides are used. A manual slide projector costs around Rs.1000/-. This will be a permanent equipment for the school. Once it is purchased, the school will not have to go for expenses every year. If non-projected pictures would be utilized the use of slide projector for SBP would not arise at all. Only the school has to spend on the packages of the strategies for SBP (if they are priced by the A.I.R.) and other teaching aids like maps, charts, models etc.

In chapter II, it has been mentioned that the schools do not have budget provision for SBP. Only a few schools collect fees from the students to the extent of 10 paise per student. So provision can be made in the budget for this purpose and if necessary all the schools may collect nominal fees from the students.
Considering the amount of time and money required for development and implementation of the strategies the investigator feels that this attempt of using SBP will be feasible in the schools where the radio broadcasts are in use. The educational planners, administrators and practitioners, considering the educational value of the medium of radio, should come forward for implementation of this strategy.

REFERENCES

