

CHAPTER V

SUMMARY

The Problem

Television is increasingly being utilised by developed as well as developing countries in their educational system. In India, the first experimental service was started in September, 1959 in Delhi and was directed towards social education. This was followed by school education project and the programmes were telecast for secondary and higher secondary classes. From March, 1975 Delhi Doordarshan started telecasting educational programmes for primary school children. These were in the form of enrichment programmes and their frequency was twice a week for twenty minutes only. During Satellite Instructional Television Experiment (SITE, 1975-76) which was conducted in 2400 villages in six states, viz., Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa and Rajasthan, the morning transmission was meant for primary school children.

Following the success of SITE in 1975-76, India decided to have a multi-purpose National Satellite of her own. The Indian National Satellite (INSAT-1) system represented India's first step towards this direction.

INSAT-1B has already been launched and it is expected to become operational in October, 1983. The television component of INSAT-1B will be mainly utilised for the education of elementary school children.

Significance: In India, educational television has been in use for more than two decades. Very few studies have been conducted on the effectiveness of educational television and procedures adopted in utilising television for educational purpose. Hence, a good deal of doubt remains as to how their potential is to be fully utilised.

As mentioned earlier, Delhi Television Centre started the telecast of educational television programmes for primary school children in 1975. So far only two studies have been undertaken and both are status studies on the utilisation of primary school programmes, conducted by A.I.R. (1975) and Doordarshan Kendra, Delhi (1982). Now with the launching of INSAT-1B in 1983, it is envisaged that educational television would be utilised more and more for the education of primary school children. It seems worth while to study the effectiveness of educational television as it is being used and also to find out ways and means to improve its effectiveness.

It is hoped that the present study will give information regarding the utility of educational television

programmes for the educational development of children and also on the teaching-learning strategies for reinforcing instruction on educational television, so as to optimise its effectiveness. In addition, this is likely to bridge the gap between the producers and users of educational television programmes by providing feedback to producers and educational administrators on the different aspects of the programmes for improving their effectiveness and utilisation.

Statement of the Problem

A study of the effectiveness of educational television on the educational development of primary school children.

In this study, educational development has been confined to language development, acquisition of information related to ETV programmes and scholastic achievement of children at the fifth grade level.

Objectives of the Study:

1. To study the effect of educational television on the educational development of primary school children in terms of:

- language development,
- acquisition of information related to educational television programmes, and
- scholastic achievement.

2. To study the effect of intervention programmes, that is, pre and post-telecast activities to be conducted by teachers along with educational television on the educational development of primary school children in terms of:

- language development,
- acquisition of information related to educational television programmes, and
- scholastic achievement.

3. To provide feedback to administrators and producers on different aspects of educational television programmes.

Formulation of Hypotheses: Keeping in view the objectives of the study, corresponding hypotheses were derived.

These were:

Hypothesis 1.1

With the combination of sight and sound, television is the most powerful communication instrument. Language is needed for communication. All television programmes, whether for language teaching or for enrichment of curriculum, provide opportunity for the development of language. Besides, they can also present a model language expression. This led to hypothesis:

Children exposed to ETV programmes in schools will have higher language

development than those who are not exposed to such programmes.

Hypothesis 1.2

Children receive information from different sources but they remember television programmes longer than classroom events (Mc Luchan, 1962, 1964). This led to hypothesise:

Children exposed to ETV programmes will have higher information related to ETV programmes than those who are not exposed to such programmes.

Hypothesis 1.3

Television is a rich source of knowledge supplemental to school curriculum. This medium which portrays happenings directly and dramatically has tremendous impact on children. It was expected that ETV programmes would widen the horizon of children, motivate and make them interested to learn more, which will be reflected in their achievement in school, in subjects like, Hindi, science and social studies. As such, it was hypothesised:

Children exposed to ETV programmes will have higher scholastic achievement than those who are not exposed to such programmes.

Hypothesis 2.0

To achieve the best possible use of all kinds of inter-related learning experiences in terms of goals to be

achieved, the medium has to be utilised at the receiving end. Pre-telecast activities conducted by the teachers prepare the children for the programme and post-telecast activities strengthen and enrich the information, values and skills^{conveyed}/in the programme. This led to hypothesise:

- 2.1 Children exposed to ETV programmes in schools along with intervention programmes will have higher language development than those who are exposed to ETV programmes without intervention.
- 2.2 Children exposed to ETV programmes along with intervention programmes will have higher acquisition of information related to ETV programmes than those who are exposed to ETV programmes without intervention programmes.
- 2.3 Children exposed to ETV programmes with intervention programmes will have higher scholastic achievement than those who are exposed to ETV programmes without intervention.
- 2.4 Children exposed to ETV programmes along with intervention programmes will have higher language development than those who are not exposed to ETV programmes.
- 2.5 Children exposed to ETV programmes along with intervention programmes will have higher acquisition of information related to ETV programmes than those who are not exposed to ETV programmes.

- 2.6 Children exposed to ETV programmes along with intervention programmes will have higher scholastic achievement than those who are not exposed to ETV programmes.

Methodology

Design: The study employed pre-post control group design. There were three groups in the study, two experimental groups and one control group.

In experimental groups, two treatments were administered. Under treatment I children were exposed to educational television programmes without intervention programmes. Under treatment II, children were exposed to educational television programmes along with intervention programmes, that is, pre and post-telecast activities to be conducted by the teachers with the students. For this purpose teachers were given brief training in the use of educational television programmes. Guidance notes for each programme were prepared by the investigator after pre-viewing the programme and were sent to teachers of experimental group II well in advance. These schools were visited by investigator, on the day of telecast to see if the activities are properly conducted by the teachers.

Thus, there were three groups in the study, viz., (i) experimental treatment group I (ETV group),

(ii) experimental treatment group II (ETV group with intervention) and (iii) control group (Non-ETV group).

For the third objective of the study, namely, to obtain feedback from teachers for improvement and effective utilisation of educational television programmes, teachers of experimental groups were interviewed at the end of the academic year.

Sample: The sample consisted of girls studying in class V in Municipal Corporation schools of Delhi. When the study was initiated in 1978, there were (155) primary schools under Municipal Corporation of Delhi, out of which only (155) schools in ten zones were provided with television sets. Television sets were provided generally to those schools which had pucca building and which cater to children of families with no facility for television viewing. As the purpose of this study was to find out the effectiveness of educational television on the educational development of primary school children, it was necessary to conduct the study in those schools, where most of the educational television programmes were shown to children and where television sets get repaired quickly in case of some fault. For selecting sample for the study in consideration to these, the following procedure was adopted.

A questionnaire was administered to 155 schools having television sets to get information on (i) utilisation of educational television programmes and (ii) repair of television sets. On the basis of response to questions, it was found that there were only 45 schools in which most of the television programmes were shown to the children and television sets got repaired quickly in case of some fault. Out of these 45 schools, 12 schools were drawn randomly for two experimental groups. Out of these 12 schools, 6 schools were drawn randomly for experimental group I where educational television programmes were shown and the remaining 6 schools were in experimental group II, where educational television programmes were strengthened by intervention programmes. The selection of 6 schools for the control group was made with the help of officers of the Education Department of Municipal Corporation of Delhi, so that the groups were comparable. These officers were given the list of 12 experimental schools and were requested to suggest six schools without television which have (a) pucca building, (b) which cater to children of families where most of them do not have facility for television viewing, (c) where qualifications and experience of teachers are similar to those teaching in 12 schools

selected for the two experimental groups and (d) where performance of children is similar to those studying in 12 schools selected for experiment.

Finally, 18 schools were included in the sample for the study; of these 12 were experimental and six control schools.

The total number of children in the three groups was 447. Of these, 153 were in experimental treatment group I (ETV), 149 in experimental treatment group II (ETVI) and 145 in control group (Non-ETV). However, as the number of children in three groups did not differ much, it was decided to equate the number of children in three groups for convenience in computational analysis. To equate the number of children in each group, eight children in ETV group and four children in ETVI group were dropped randomly. Finally, there were 145 children in each group, and a total of 435 children in three groups.

For the third objective of the study, in order to provide feedback to administrators and producers on different aspects of educational television programmes, 12 teachers of schools under two experimental groups formed the sample.

Instrumentation

For measuring certain variables for the study, instruments developed by others were used, some were adapted and some were developed by the researcher. The instruments used in the study were:

1. Intelligence test.
2. Tests for language development viz., word meaning, verbal fluency, listening comprehension and reading comprehension.
3. Achievement tests in three school subjects namely, science, social studies and language.
4. Test based on educational television programmes.
5. Proforma for teachers.
6. Interview schedule to get feedback from teachers regarding the different aspects of educational television programmes.
7. Guidance notes for intervention programmes.

These instruments are briefly described below:

1. Intelligence Test: Raven's coloured progressive matrices, which is a non-verbal test was used to find out the level of intelligence in three groups of children.
2. Tests for language development:

Word Meaning: This test measures the grasp of meaning of words within the expected passive vocabulary of class V children. This was an objective type test having multiple choice items. The test was developed by

Shukla and Kumar (1977). To ensure the suitability of the test for the present study, the test was tried on 100 girl students of class V of Municipal Corporation schools of Delhi. The results of the try-out were analysed. The suitability of the test was found on the basis of (i) item analysis, (ii) reliability and (iii) validity. Here it may be mentioned that same procedure was followed to ensure the suitability of other three tests on language development for the present study.

Verbal Fluency: This test measures the richness of vocabulary which can be recalled around a central concept. There were five items in the test. This test was also developed by Shukla and Kumar (1977).

Listening Comprehension: The test developed by Shukla and Kumar (1977) was modified to suit the purpose of the study. There were four stories/paragraphs in the test. Each story/paragraph was read once and children were asked to write the answers. The test measures the ability of children to recall the content, sequence of events, to think critically about the event and arrive at a judgement and to draw conclusions.

Reading Comprehension: The test developed by Gupta (1967), was adapted to suit the purpose of the study. This test measures the reading comprehension abilities, such as, understanding of meaning of words,

phrases and sentences in a given context, finding the main idea, finding the specific details, understanding the sequence of ideas, making relationship of cause and effect and predicting outcomes of what is read.

3. Achievement Tests: The achievement tests in three school subjects, namely, science, social studies and language were developed by the investigator. These tests were syllabus based and were constructed and validated according to the normal procedure of achievement testing.

4. Test Based on ETV Programmes: This was based on educational television programmes telecast during the year of study. All the programmes were seen by the investigator and a test was developed to see how much information children have acquired and retained from the educational television programmes.

5. Proforma for Teachers: A proforma for getting the information about the qualifications and experience of teachers teaching class V girls was developed by the investigator.

6. Interview Schedule: This was also developed by the investigator to get feedback from the teachers on different aspects of educational television programmes and their suggestions for the improvement and proper utilisation of the programmes.

7. Guidance notes for Intervention Programmes: Guidance notes for all the educational television programmes telecast during the year of study, were developed by the investigator for the experimental treatment group II (ETVI). The investigator used to see each programme in the studio's of Delhi Doordarshan at the time of recording, then prepare the notes for teachers and send them well in advance. The notes included objectives of the programme, summary of the programme, pre-telecast activities and post-telecast activities. The post-telecast activities also included extra information related to the programme and follow-up activities.

Data Collection: A uniform testing procedure was adopted in both the treatment and control groups. In the beginning of the first term intelligence test as well as tests for language development and scholastic achievement were administered to children in the three groups. During the third term, that is March-April, 1979 post-tests on language development, scholastic achievement and test based on ETV programmes were administered to all the children in the three groups.

The teachers were interviewed in April, 1979 to get feedback on different aspects of educational television programmes.

Analysis of Data

The testing of hypothesis involved testing of significance of the differences on criterion variables under different treatments. Therefore, analysis of covariance was used to study the difference in post-test scores between treatment groups after adjusting for the initial difference in pre-test scores.

Apart from analysis of covariance, pair-wise comparison for different treatment groups were made to study the difference between ETV and Non-ETV group, ETV with intervention and ETV group; and ETV with intervention and Non-ETV group. This analysis reveals how far the overall significance of difference among group means is attributable to a specific contrast.

For one variable, namely, acquisition of information related to ETV programmes, only post-test scores were available. Therefore, on this variable, analysis of variance was used to find out if the three groups differed. As the groups were different, 't' test was used for paired comparisons of the groups. Analysis of variance was also used for comparing the three groups on intelligence. The difference was found not to be significant. The three groups were found to be well equated on intelligence for analysis purpose. The presentation of data emerging from the interviews of teachers followed

discriptive approach.

Findings

The results of this study tend to indicate:

1. The language development of children exposed to ETV was higher than those not exposed to ETV.
2. The language development of children exposed to ETV alongwith intervention programme was higher than those exposed to ETV without intervention programmes and to those not exposed to ETV programmes.
3. The ETV group was found higher on acquisition of information related to ETV programmes than Non-ETV group.
4. The ETV group with intervention programme was found higher on acquisition of information related to ETV programmes than those exposed to ETV without intervention and to those not exposed to ETV.
5. The scholastic achievement of students exposed to ETV programmes along with intervention was higher than the ETV and Non-ETV group. For ETV group also the results were in positive direction on achievement in language and science but not in social studies. Out of the nine comparisons made in three school subjects, only five have reached the level of significance.

It may be seen that the results obtained on scholastic achievement are different than those obtained on other variables. The reason may be that the programmes telecast by Delhi Doordarshan are not syllabus based. These are enrichment programmes, which could be seen as something interesting and informative but not much to do with instruction or teaching. It appears that a few

programmes connected with school subjects did not have much effect on the achievement of children in school subjects. The two programmes telecast on social studies were found difficult by children. This was reported by teachers during interview for getting the feedback on different aspects of ETV programmes. Another reason may be that the whole process of teaching-learning examination may be too rigid and well established to permit quick infiltrations by indirect means. It is in consideration to these that the results obtained on scholastic achievement have to be seen.

One of the objectives of this study was to provide feedback to producers and educational administrators on different aspects of educational television programme. With this end in view the teachers of both the experimental groups of schools were interviewed at the end of the year. Some of the suggestions made by teachers for improving upon the programmes as well as their utilisation are reported as under:

1. Proper weightage should be given to syllabus based programmes. The average ratio given by the teachers for syllabus based programmes was 64.58 percent and for enrichment programmes, it was 35.42 percent. Here, it may be mentioned that at present only enrichment

programmes are telecast by Delhi Doordarshan for primary school children.

2. Regarding the subjects on which they would like to have support from ETV programmes, all the 12 teachers wanted to have programmes on science and social studies, six on arithmetic, one each on general science, Indian culture and hardwork.

3. For language of programmes the suggestions given were: (i) language should be simple, easy and according to the level of children, (ii) English words should not be used and (iii) correct expression and pronunciation should be used.

4. As far as the style of presentation is concerned, eleven teachers had shown preference for dramatised form, seven for films, three for poems and riddles and two for use of games in the programmes. All teachers expressed the view that lecture format is not liked by children.

5. For quick repair of TV sets, six teachers suggested that principal should have authority to get TV repaired from any mechanic, four teachers were of the opinion that contract for the repair of TV set should be given to some workshop nearby the school, two teachers were of the view that there should be TV workshop of Municipal Corporation, Delhi for the repair of TV sets.

6. All teachers were in favour of having guidance notes for every programme, so that pre and post-telecast activities could be properly conducted.

7. All the teachers of experimental group II schools reported that they liked the format of guidance notes sent by investigator giving day and time of the telecast, title of the programme, brief description of the programme and guidelines for the conduct of pre and post-telecast activities.

Implications

The findings of this study indicate that the educational television programmes have positive effect on the language development of children and the relative effectiveness of ETV programmes increases with intervention programmes. The findings on acquisition and retention of information related to ETV programmes are also similar to the finding for language development. The implication of these findings are that educational television has the potentiality to effect the language development and to provide information to children. Therefore, the medium has to be better harnessed towards this end, by designing and producing software more suitable for the development of children.

The findings of this study indicate that the

relative effectiveness of ETV programmes increases with the active participation of teachers. This reinforces the idea that teachers should be trained for the proper utilisation of ETV programmes and guidance notes should be sent to them for each programme well in advance.

In scholastic achievement, results were not very conclusive. However, it appears that if more programmes related to syllabus are telecast, it may contribute more to the achievement in school subjects.

As regards, feedback from the teachers, it was found that teachers want help in teaching of certain subjects. This implies that the teachers of primary schools and the producers of primary school programmes should work as a team and decide the content, presentation etc., of the programme.

Besides the content and quality of programmes, the organisational aspect should also be taken care of. As may be seen from the review of studies¹ carried out since its inception to date, there is ample evidence to state that television, which is said to be the most powerful communication medium in the history of civilization (Perrin, 1976), is under-utilised in our schools. One of the important reasons for the under-utilisation of this medium is that most of the TV sets remain out of order. Therefore, there is a need to develop proper

infrastructure for the maintenance of TV sets.

Other organisational aspects which should be taken care of include supply of teacher's guidance notes and counselling of the teachers on the part of supervisory staff. It is hoped that if care is taken for all the aspects mentioned above, it may help in fuller utilisation as well as in increasing the effectiveness of ETV programmes.

Suggestions for Further Research

The present study was confined to the effectiveness of educational television and also of educational television with intervention programmes on the educational development of primary school children. The study also aimed at providing feedback (to a limited extent) from teachers to producers and administrators for improvement and effective utilisation of ETV programmes. Keeping in view the limitations of the study, some further research is required to probe into some other aspects of educational television and to substantiate the findings of the study for generalisations.

This study was conducted on urban population in Delhi. There are limitations in generalising the findings to rural, tribal, hilly and other populations. It is suggested that more heterogeneous populations covering

different geographical regions, socio-economic groups, language groups, etc. may be brought in the sampling frame.

Longitudinal studies may be conducted on selected groups of children on the effectiveness of educational television. Such studies have an advantage in establishing the long range cumulative effect of educational television. These kinds of studies will also reveal the effectiveness of television at various age levels. Interviews with teachers revealed that they would prefer to have more curriculum-based programmes. Hence, comparative studies on curriculum-based and enrichment programmes for imparting learning experiences at the primary level may be undertaken. Studies could also be undertaken to find out if curriculum based programmes affect the utilisation of educational television as compared to enrichment programmes.

Research attempts in the area of educational television also need to focus attention on the various aspects which affect the effectiveness of educational television programmes. These include procedures of planning the content of the programme for different grade levels; production of programmes, specifically, formats, language and quality of presentation and the manner in which the programmes are utilised at the receiving end.