

CHAPTER II

REVIEW OF LITERATURE

This review presents studies concerning the impact of television on school children. It is particularly concerned with the application of television in a school situation, generally termed as instructional, educational or school television. Studies on influences of television exposure outside the school have also been included. However, in view of the vast and varied literature on the subject, only significant studies have been considered here.

These studies are arranged under five groups. The first group includes studies on learning through the medium of television and their comparison with traditional classroom teaching. The second group of studies relates to the impact of aggressive and violent television content on children's behaviour. The third group of studies relates to the impact of specially designed programmes for children on cognitive and pro-social development. The fourth group of studies relates to the impacts of television in general and on other varied aspects. Studies on television conducted within the country are grouped together in the end.

Impact on School Learning

Studies related to the impact of television on the classroom learning are directed to find out whether classroom teaching can take place more efficiently by using this medium, in comparison to traditional teaching; what subjects and skills can best be learnt; and how effective is the learning.

A number of studies have come out comparing the television learning with the traditional teaching, keeping in view specific objectives. However, some of the most outstanding studies are those which have compiled the findings of the smaller studies and have reviewed the overall effects in an integrated manner.

Chau and Schramm (1967) examined 421 television and classroom comparisons. Among these, 308 showed no significant differences, 63 came out in favour of television and 50 in favour of classroom teaching. The analysis led them to summarise these results into sixty well defined conclusions. To quote a few:

"Given favourable conditions, children learn effectively from television."

"By and large, instructional television can more easily be used effectively for primary and secondary school students than for college students".

"Television can be used effectively to teach any subject matter where one-way communication will contribute to learning".

"Television is effective as a tool for learning when used in a suitable context of learning activities".

These and other conclusions of Chau and Schramm show how the impact of the television can be enhanced, so as to be of practical use to the programme producers and users alike.

In an earlier comparison study, Schramm (1962) reviewed 393 experimental comparisons of instructional television with classroom teaching. In 65 per cent of the experiments, he found no differences in the amount of learning; in 14 per cent the classroom students learned more. It is significant to note that a higher percentage of the comparisons were favourable to television in elementary school than in high school. Students attitude towards instructional television were quite favourable in the early grades, but less favourable in high school and still less so in college.

Stickell (1963) reviewed 250 experimental comparisons. He found only 10 studies interpretable, implying that they had met every requirement of a rather demanding standard. Stickell's rigid standards included:

comparability of the control and experimental subjects; assignment procedures employed; comparability of the instructors of the experimental and control group and the tenability of statistical assumptions. He discarded 217 studies which did not meet this requirement. Among these discarded studies, only 59 showed a difference between the experimental and control groups, about evenly divided between results favouring television or favouring classroom teaching. Of the 33 studies, which he felt constituted the cream of the experimental comparisons, only 3, none from the interpretable ten, showed statistically significant differences in favour of television. On the basis of these, he concluded that neither the television nor the face-to-face mode of instructions has been shown to be superior as measured by achievement tests.

Dublin and Hedley (1969) worked with 192 comparisons and wherever possible, computed standard scores from the reported data and combined them. They found instructional television without talk-back significantly superior to instructional television with talk-back, but not significantly different from conventional instructions, so far as learning was concerned.

Allen (1971) reviewed studies on instructional television and concluded that the students learn from television cannot be doubted, but the conditions under which learning takes place, and the specific characteristics of the television presentation that brings this about are yet to be determined, and most research ignored such questions.

The above mentioned studies indicate wide variations in results, in either direction. This has been explained by Cronbach (1975). Learning from television is an interaction between treatment and ability. There are many characteristics of the learner that interact and alter the effects for different individuals, more such characteristics than any experimenter is likely to control, more than he is able to know about. Beyond the interactions observed or thought to be controlled in the experimental design, there are very likely to be higher level interactions. This is one reason why experimenters obtain puzzling variations in results from experiments that use the same treatment and apparently "comparable" learner. To pin down all these interactions require more data than an experimenter can ordinarily handle.

The review thus indicates that learning of school

subjects and skills is possible through television. However, many factors contribute to its effectiveness.

Impact of Television Violence

Because of the growing coverage of violence on the screen, special attention has been paid by researchers to the possible effects of this violence. In studying these effects, three different methods have been used, namely, survey, laboratory experiments and experimental field investigations.

One of the earliest studies by Himmelweit, Oppenheim, and Vince (1958) used the survey method. They obtained aggression scores of children from teachers' ratings and personality inventory. When children from television and non-television homes were compared, there was no difference on either of the aggression measures. Similar results were reported by Schramm, Lyle, and Parker (1961) using Canadian sample. The conclusion of these studies was that there appeared to be no ground to believe that watching television would make children behave aggressively. Mass media at that time had limited and minor impact on individual behaviour.

Surveys undertaken recently have paid greater attention to the measurement of expressed aggression and

the amount of aggression viewed over television. A number of surveys used mother's report as index of violence viewing (Stein and Friedrich, 1972; Eron, 1963). Other studies (Fiedman and Johnson, 1972; Lefkowitz et al 1972; McIntyre and Teevan 1972; Robinson and Bachman, 1972) used violence viewing score based on classification of programme preferences. These have shown a weak to moderate relationship between preference for viewing television violence and children's aggressiveness.

Experimental studies have tested two contradictory hypotheses, namely that television violence serves as a catharsis, and that it serves as an imitation model. Feshbach's (1955) original hypothesis was that television violence serves as a safety valve, by means of which a child might rid himself vicariously of pent-up energy. Feshbach (1955) conducted an experiment in which half the group of experimental subjects were deliberately insulted so as to rouse their feelings of aggression. Then half the insulted group and half the non-insulted group were shown pictures that encouraged them to express their feelings of fantasy. Thematic apperception test pictures were used for this purpose. The students who had been insulted, and were then shown

the fantasy pictures, showed significantly less aggression than those insulted but not shown the pictures. The insult-fantasy group showed considerably more aggression in their response to pictures than did the non-insult-fantasy group. Feshbach made no claim that these results would necessarily apply in all cases of television viewing. But assuming that children's television viewing is fantasy behaviour, the experience of viewing television helps children to reduce their level of aggression.

Other investigators have come out with exactly the opposite results. In an experiment conducted by Bandura, Ross, and Ross (1961), one group of children was shown an adult hitting and kicking a "bobo doll", a large rounded doll which had weights in its feet, so that it can be used as a sort of punching bag. A comparable group of children was shown adult non-aggression behaviour. At a later time, the children were stimulated in such a way, as to irritate them mildly and to bring out aggression in them. They were taken into a room where there were a number of attractive toys, including the bobo doll. The children who had been shown the aggressive behaviour typically imitated it. They went to the bobo doll and began hitting and kicking it. The children

who had not seen the aggressive behaviour did not do this and displayed considerably less aggression generally. The implication is that when children see aggressive behaviour on television, they may imitate it, when their own aggression is high and when opportunity is at hand.

In another study by Bandura (1965), children who saw aggressive model whose behaviour was punished, performed significantly fewer imitative aggressive acts than children who saw model either rewarded or praised. Boys imitated the aggressive models more than girls.

Berkowitz and Rawlings (1963) in a similar study demonstrated that when aggression is justified on films or television, it lowers the children's inhibitions against expressing their own aggressions and does not reduce these aggressions vicariously.

Bandura, Ross, and Ross, (1963) studied whether children would be more likely to imitate aggressive behaviour seen in real life than similar behaviour seen on films or in cartoons. One group viewed aggressive behaviour performed by live human model, another saw a film of the live model, and the third saw a film using cartoons. The control group saw nothing. After

viewing, the children were mildly frustrated and then allowed to play for twenty minutes in a room containing bobo doll. Children who had seen the aggressive behaviour played significantly more aggressively than children who had not seen the demonstrations. Three experimental groups did not differ significantly in total aggression. The results suggest that very young children are likely to imitate aggressions seen on television or in films, as aggression seen in real life.

Bandura, Ross and Ross (1963) found that imitative aggression accounted for the largest proportion of total aggression, but also found that exposure led to significant increase in non-imitative aggression.

Lovaas (1961) showed an animated cartoon with much aggressive material, to one group of children, and a similar cartoon without aggressive material to another group. Afterwards he gave each child a choice between two toys to play with. One of them was an aggressive toy. The child could make one doll hit another on the head. The other toy had moving doll figures that did not hit one another. The children who had seen the aggressive pictures, tended to prefer the aggressive toy, while the others, the non-aggressive toys. The implication is that viewing aggressive action in films

or television programmes may tend in some degree to rouse children's aggressive impulse.

Eron et al (1972) were able to obtain new data on the television viewing and aggressiveness from adolescents, on whom they had collected such data a decade earlier. They interpreted their data as establishing that greater viewing of violence in the earlier childhood resulted in greater aggressiveness, as measured by reports of Peers, ten years later.

In an experiment conducted by Friedrich and Stein (1973) children were divided into three groups with three types of television programmes: aggressive, neutral and prosocial. It was found that those children who were initially more aggressive than average showed greater inter-personal aggression after being exposed to the aggressive programme content than similar children exposed to neutral or prosocial content. Children who were initially less aggressive were not differentially influenced by the three conditions, so far as their aggression scores were concerned. These findings supply evidence that it is very hard to refute the assertion that violent television contents do appreciably influence some children's behaviour.

In a large scale field study, Feshbach and Singer (1971) evaluated the effects of prolonged viewing of televised aggression. They found the majority of differences between boys, in the aggressive and the non-aggressive televiewing groups, were insignificant. But they found that boys who watched non-aggressive programmes were more aggressive in their social relations than other boys, who viewed aggression. These results suggest that boys most-at-risk use televised aggression in order to control their own aggressive impulses; that watching televised aggression purges them of their aggressive feelings.

Anderson (1978) compiled the results of all the empirical attempts to link aggression with exposure to television violence. When 67 studies were divided into those reporting negative aggression (that is reduced aggression, favouring a catharsis interpretation), no aggression (non-significant) and positive aggression (results favouring aggression), a large majority fell into the latter category.

Not all reviewers are in agreement about the nature and extent of the effects of viewing televised violence. For example, Howitt and Cumberbatch (1975), two British researchers argued that "mass media do not

have any significant effect on the level of violence in society". However, in that same year, Comstock and Lindsey (1975), who reviewed much the same evidence stated, "The widespread belief that Surgeon General's Scientific Advisory Committee's conclusion that the evidence suggests a causal link between violence viewing and aggression, is correct".

To sum up the findings of different studies using different stimuli, different sets of instructions and varied samples of children and young adults are remarkably consistent. The evidence at present favours the hypothesis that exposure to television violence increases the likelihood of subsequent aggressiveness.

Impact of Children's Programmes

Television researches have recently shifted their priorities from studying the anti-social influences of television to examining the socially desirable or "prosocial" effects of the medium. However most of the studies are confined to pre-school children.

Children's programmes in the West have received wide attention by research workers for their positive impact. Such programmes include Sesame Street, Mister

Roger's Neighbourhood, and The Electric Company. Children's Television Workshop started producing Sesame Street programmes towards the end of 1969. Since then they have been extremely popular with young children. In fact one result had been that the "Sesame Street characters have become a part of the culture of childhood in the United States for all times" (Goldsen, 1976). Over the years, a large number of studies have been undertaken around these programmes.

The production of Sesame Street is an example of formative research where educators, psychologists and researchers have heavily contributed to its production. During production the programmes were subjected to empirical field verification, at different stages (Palmer, 1977). An hour long programme was likely to contain fifty separate parts. The idea was to "sell" young children things they ought to know. The general aim was to promote intellectual and cultural growth of pre-schoolers. On the other hand Mister Roger's Neighbourhood was concerned with improving children's social and emotional development.

The Sesame Street programmes have four major categories: symbolic representation (knowledge of letters, numbers, and some simple words and geometric

forms); cognitive organization (skills based upon perceptual discrimination, knowledge of relationships, classification and ordering); reasoning and problem solving (ability to infer antecedent events and to predict subsequent developments and to put forward explanations and evaluate them). The concept taught in Sesame Street that relate to child and his world, include recognition of the parts of the body, and an elementary understanding of the social groups and social interactions.

The impact of the Sesame Street has been evaluated by Ball and Bogatz (1970; 1972). A large battery of tests measured performance at thirty six primary goals and assessed other effects of the programme. About 1300 children were studied. They were divided into four groups on the basis of how often they saw the programmes. The first group consisted of those who saw rarely or never; there were two groups with intermediate amount of exposure and the fourth group saw five exposures per week. The majority of children came from backgrounds which could be described as 'disadvantaged'.

The research findings show that the disadvantaged children who watched Sesame Street most often gained considerably more points than the others. Disadvantaged

children who received some form of nursery schooling scored higher on pre-test than disadvantaged children at home all day. However those at home who did watch the programme gained more than most other subgroups. In the post-test, middle class children who watched little or none of the shows, received lower scores than heavy-viewing disadvantaged individuals, a fact which encouraged the authors to suggest that Sesame Street can help to close the gap between advantaged and disadvantaged young children. No differences in intelligence were found between those who made large gains and those who improved least. But it was observed that the mothers of the children who learned most from the programme talked with their children about Sesame Street to a greater extent than did the other mothers. Sesame Street has been shown to be a highly effective educational programme which has successfully taught basic skills to children from a range of very different home backgrounds.

Coat, Pusser and Goodman's (1976) study was designed to assess the influence of Sesame Street, and Mister Roger's Neighbourhood programmes on children's social behaviour in pre-school. Observations of children's behaviour in pre-school were conducted, before during and after one week of the exposure to each of the

programmes. These observations consisted of frequency of giving of positive reinforcement like praise and approval, sympathy, affectionate physical contact etc.; and punishments, like verbal criticism, negative greetings, hitting, kicking etc., to other children and to adult in the pre-school. The children's social contact with other children and with adults was also measured. For children whose baseline scores were low on these category, Sesame Street significantly increased the giving of positive reinforcements, punishment to, and social contact with other children, and with adults. For all children whose baseline scores were high, Sesame Street had no significant effect on behaviour. On the other hand it was found that for all children (high or low in the baseline scores), Mister Roger's Neighbourhood significantly increased the giving of positive reinforcement to and social contact with, other children and with the adults in the pre-school.

In another experiment Stein and Fredrich (1972) found that pre-schoolers exposed to prosocial television showed an increase in self-control behaviour, like tolerance to delay, obedience to rules, persistence in tasks, in the day-to-day nursery school environment. Moreover, children from lower socio-economic status families who

viewed prosocial programmes increased prosocial interpersonal behaviour, like verbalization of feelings, nurturance of others, cooperation.

Silverman (1977) reports less impact on the cooperative behaviour of children exposed to specifically edited version of Sesame Street. She interprets the data as suggesting that televised examples of prosocial behaviour may not influence behaviour even when cognitions are affected.

Another study employing Sesame Street material is reported by Gorn, Goldbery and Kanungo (1976) who were concerned with the potential impact of the programme on racial attitude. They showed twelve minutes version of Sesame Street that involved specially made inserts portraying children of other racial groups playing in either a segregated or integrated setting. Compared to the control group not exposed to the inserts, children who observed the programme with the inserts, showed significantly more preference for playing with non-white children as opposed to white children, when asked to choose potential playmates from sets of photos.

The overall implication of these studies is that if the programmes are specifically designed and followed

by suitable formative research, it is possible to influence cognitive and prosocial development of young children on socially desirable lines.

Impact Studies in General

In the earlier phase of television introduction, the studies on television's impact by Himmelweit, Oppenheim, and Vince (1958); Schramm, Lyle, and Parker (1961), concentrated on different aspects of television viewing and in a general way studied the effects of the introduction of television. These studies provided evidence concerning the television behaviour, the effect of television on leisure time pattern and reactions to television, of large and representative children. By comparing children with television, to children without television, and by extrapolating from survey data, they studied the effects.

Wherever television becomes available, it dominates the leisure time of children. Recent studies by Greenberg (1976) report that British children spend about $2\frac{3}{4}$ hours per day watching television. For older children viewing time increases to 3 or $3\frac{1}{2}$ hours. In Japan, Furu (1971) reports that average fourth-grade children watches about 2 hours per day. According to

Murray and Kippax (1981) the general pattern is that countries where there is a large amount of television available, there is greater viewing on the part of young children.

One direct result of television watching is that it may displace many regular activities, but may also stimulate other activities. Introduction of television in a community brings about changes in the leisure patterns. The major studies which investigated this aspect include: Belson (1967), Himmelweit, Oppenheim, and Vince (1958), and Swiff (1976), in England; Coffin (1955), and Schramm, Lyle, and Parker (1961) in North America; and Furu (1960, 1971) in Japan. On the whole, the pattern of television's influence on the life style of children is marked by a decrease in a wide range of activities, following the introduction of television and later on; followed by a modest return of interest in these displaced activities.

Television viewing affects the children's studies at home and consequently their performance in school. The studies on the impact television viewing on the overall school achievement has reported conflicting findings. Some investigators like Childers and Ross (1973), Clark (1951) and Lyle and Hoffman (1972) report

no significant relationship between these variables. Other studies by Scott (1956), Greenstein (1959), and Murray (1972) support the contention that the amount of television watching is inversely related to academic achievement.

Recent study by Burton, Calonico and McSeveney (1979) support the statement that amount of pre-school television watching is a good predictor of academic success and choice of friends among first graders. According to Hornik (1976) television 'displaces' reading. Watching television, he found was such a popular pastime that many children had little time for reading and less incentive to learn to read.

The influence of television in shaping the children's attitude can be inferred from the studies conducted by Peterson and Thurstone (1933). In the early thirties, they undertook to discover whether children's social attitudes could be influenced by movies. These investigators established conclusively that movies can change the attitude of children towards social issues. By measuring the cumulative effects of films, they found that attitude produced by films were lasting.

Gerbner and Gross (1976) have found that exposure

to television is correlated with perceiving the world more in accord with the way it is portrayed in television drama.

Maccoby (1963) reviewed studies on television and concluded that children's attitudes and beliefs can be shaped by what they see on television and that emotions and impulses are aroused in the child view to match those portrayed by screen characters.

Dorr (1981) has provided evidence to show that television can arouse emotions in children and adolescents. It can provoke feelings which can be measured during viewing, right after viewing and in more generalized long term situations. Gerbner and Gross (1980) have assessed television's evocation of the negative emotions of fear. They assert that older children, adolescents and adults who are heavier viewers of television are more likely to see the world as a dangerous place. Dobb and Macdonald (1979) have also elaborated this hypothesis recently.

A few investigators have studied the impact of television on the creative behaviour of children. In a study, Meline (1976) compared the capacity of three different mediums, namely, print, audiotape and



videotape to stimulate or inhibit creative thinking. Using sixth and seventh-grade children, he found that children in videotape condition gave fewer solutions which departed from given facts and concepts. Children in the audiotape or print condition gave more stimulus free and transformational ideas. The implication is that television (like videotape) may not be a superior medium to stimulate creative response.

Stern (1974) has reported a similar trend towards decrease in creativity among mentally gifted children as a result of viewing commercial television. Two hundred and fifty elementary school mentally gifted children were divided into seven groups, and were instructed to watch specific categories of television production exclusively, like educational television, cartoon, sports, comedies, drama, and everything. The seventh group became control and was not given any specific instructions. At the end of three weeks children were post-tested with alternate form of Guilford test of creativity. Scores of the control group showed an increase in creative ability, when the post-test scores were compared. Scores of the experimental group showed a notable decrease in all the areas except for verbal abilities.

In another study on the impact of television on creativity, Harrison and Williams (1977) analysed data in three Canadian towns, with no-television, one channel and four-channel television. They administered ideational fluency tasks from Wallach and Kogan's work on creativity. Children were tested in grade four and seven in all the three towns. Following introduction of television in the no-television town, tests were again given in grade six and nine to children who had taken test earlier. The investigators found that in the no-television group, children's verbal fluency scores decreased significantly from first to the second phase of the study. The evidence was strong that television exposure is negatively correlated to children's performance on verbal fluency tasks. There were no town differences for figural fluency scores in either phase of the project, in cross sectional comparisons, but one-channel television group scores increased significantly from the first to second phase. The television apparently did not affect the vocabulary nor the performance on Block Design but did seem to have an impact on the creativity scores.

Bailyn (1959) studied the relationship between media-usage habits of fifth and sixth grade children and

certain of their cognitive characteristics. She found that children who spent more time with the mass media were more stereotyped in their thinking.

The review thus shows that television viewing can effect children's leisure time activities, their school performance and attitudes. It also influences creativity.

Research in India

In India, the research studies concerning television are related to the student learning and teacher behaviour; sociological changes in the rural communities; and the impact on the adoption of new agricultural practices.

The first important study was that of Neurath (1966) who evaluated the Delhi Television Project, in its early stages. His main hypothesis had to do with kinds of knowledge that would be better learned with television than without it. He divided the questions into three types: (1) factual - things learned by heart from books or lectures, (2) visual - where the student draws primarily on experiments, diagrams or pictures and (3) understanding - where the student has to draw on his ability to generalize, to make deductions, to

recognize a problem or a connection, even when it comes in an unfamiliar form. He hypothesized that television students would do better with visual questions, and about the same as control on factual questions; he left open the question of which group would do better with understanding questions.

He gave four rounds of tests. Each round was given to a different sample of 250-350 television students and 100-150 control students. Television students did somewhat better overall and on all types of questions. They did best comparatively on visual questions and the difference was least on factual questions, thus being in general agreement with the hypothesis. The results that most surprised the experimenter was that television students did distinctly better on the understanding (problem solving) questions. One of the tests, he gave again, after a month's interval. The television students again did better, on all the three kinds of questions, but the difference between the television and non-television students was less on the delayed test.

Neurath recommended instructional television to be used for the teaching of physics and chemistry. He has made some interesting observations:

"Whole learning process, though not necessarily the teaching performance of every single teacher, is slowly improving".

"Science teachers are becoming aware (from seeing the television teacher) of not only of necessity but also of possibility to mobilize their own, even though in most cases rather meagre laboratory resources.. more vociferous in their clamor for more laboratory space and equipment".

His conclusions about the impact on the students and the school systems also merit examination:

"Television lessons provide a break in the routine, thus making school itself more interesting".

"The impact of television lessons, themselves is less than the impact of television as an innovation within the whole television teaching process".

Two studies of the SITE, that have wide educational implications for instructional television in schools, need to be mentioned, in some details. SITE impact study on children by Shukla and Kumar (1977) is one of the most extensive studies attempted in India so far. The study was aimed to find out changes in behaviour and cognitive development of primary school children, and changes in attitude and teaching strategies of teachers as a result of exposure to television. The results showed improvement in language of the SITE exposed group. Out of the 48 recordings of differences

between gain scores of experimental and control group (four language tests, at two grade levels, and in six regions), 46 were found to be positive and as many as 33 differences were statistically significant. In contrast to language development, picture is neither very clear nor persistent on achievement in school subjects. On the whole it seemed that the SITE either did not effect children's achievement in school subject or it affected it to a very small extent. The improvement in the school subjects was hypothesized as an indirect effect of improved attendance, attitude to school, interest in learning and language development. On teacher-pupil interaction, study showed no consistent directional trend either in favour of experimental or control schools.

As stated earlier, two inservice teachers training programmes, using multi-media approach, were conducted during the SITE programme. Shukla, Singh and Batra (1978) made three evaluations of these programmes, using control groups, with a pre and post-design. They concluded that the multi-media package was successful, in increasing the knowledge of content and pedagogy of teaching science, of the primary school teachers. The teachers were convinced that experimentation was

important, that it can be arranged without laboratories or with simple equipments. Use of television in the package, helped in reaching teachers, in large numbers, simultaneously. The message "importance of learning by doing" was well received.

The SITE's evening programmes have given rise to a number of sociological studies on the changes brought about in the villages. Agarwal and Ambekar (1980) have reported about the changes brought out in a Karnataka village. Sachidananda and Pande (1979); and Sachidananda and Jha (1980), studied communications, in a typical Bihar and Rajasthan village, respectively. Bhaskaran and Patel (1977), have brought out the viewing analysis of the SITE school programme, telecast in the four languages, Hindi, Kannada, Oriya and Telugu.

Dhawan (1974) has studied in depth about the cost of the nationwide television service and its various aspects. According to him, a nationwide television service in India would be an expensive proposition, irrespective of the television technology employed. He pleads that "before creating such a service, Indian planners must make sure that its benefits would be commensurate with its costs".

In the earlier stages of the introduction of television, a number of investigators studied the impact of the educational programmes, which were meant for the farmers. One such study carried out by the National Council of Educational Research and Training (1968) evaluated the agricultural television programmes. The evaluation indicated the efficiency of television as a medium in disseminating agricultural information.

NCERT's study of Krishi Darshan (1969) was based on a sample of respondents, drawn from teleclubs located in the rural blocks of Delhi. Seven programmes were selected. Scores on knowledge and attitude towards selected agricultural practices were obtained, before and after the experiment, from the experimental and control groups. The study concluded that the television was positively useful in increasing the knowledge regarding the new farm technology. The television served as a stimulus to create a favourable attitude towards improved farm practices.

Sekhon's (1968) study supported the findings of the NCERT study. It showed that television was useful to the farmers for learning and understanding the technical know-how of the improved farm technology.

Day (1968) studied the relative effectiveness of radio and television. The study indicated that on an average, television viewers gained and retained higher knowledge than radio listeners in all the programmes. The extent of average gain in knowledge with television viewers was 30.95 per cent against 21.12 per cent with radio listeners.

The above review brings out present status of the television research in India. It shows that not many studies have been attempted. In the next section, some areas of research more relevant to the present day needs have been suggested.

Implications for Research

The above review gives a picture of some of the research problems attempted in the west and in India. The above review is suggestive of research problems and investigations listed below:

1. How much time children and adolescents are devoting to television viewing? What is the pattern of viewing at different age/grade level and in different socio-economic groups?

2. Which subjects/topics can be most efficiently taught by television, in the school television programmes? A detailed feedback has not been attempted so far. How do curriculum based and non-curriculum based television programmes compare in imparting learning experiences? The effectiveness of the existing school programmes, at different grade levels, could be examined.
3. What specific behavioural changes television can bring about among the school children? What psychological changes it can bring about that can be related to school education.
4. Can television motivate children to better their school performance and change their attitude towards school and learning?
5. Can television influence occupational aspirations of the school-going children, particularly of the children from the low socio-economic groups?
6. How can television help in the acquisition of new value system? What useful skills can be imparted through television?

7. Some existing school enrichment programmes may be studied in depth. The feedback from children will help the producer modify the existing programmes. A body of such research findings will help the future producers to produce more effective programmes.
8. In the absence of adequate programmes, formative research can be undertaken in specific areas. The educators can actively cooperate with the producers, in evolving a series of such programmes. These programmes can be evaluated in the classroom situations.
9. In what ways can television help strengthen programmes for non-formal education and adult education? Can television help the school drop-out at the elementary level? In this context, the INSAT, the new satellite television programmes can be followed. There are possibilities to study it in action, while the programmes are on.
10. What are the needs of the rural television viewers, particularly rural school children? How far community based television viewing

successful and in what ways it can be more efficiently organized for children coming from socially dis-advantaged and economically weaker sections of society, needs scientific investigation.

11. Has television been successful in educating the masses about such concepts as democracy, secularism, national integration, family planning etc. How can they be efficiently projected for the school children, at an early age?
12. Screening of violence in films has already reached alarming proportions. This needs to be measured. In what ways television or film violence contribute and enhance aggression and antisocial behaviour in school children.

This listing of the research problems broadly covers the area of television research from an educator's point of view. As already mentioned in the previous chapter, this listing was found useful in identifying and defining the problem under investigation in the present study.