CHAPTER III

REVIEW OF RELATED LITERATURE ...
<table>
<thead>
<tr>
<th>CHAPTER III</th>
<th>REVIEW OF RELATED LITERATURE</th>
<th>PAGE NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>STUDIES CONDUCTED ABROAD</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>STUDIES CONDUCTED IN INDIA</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>64</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER III
REVIEW OF RELATED LITERATURE

INTRODUCTION

Review of literature pertaining to the problem in hand makes the investigator familiar with the summary of previous studies, the writings of recognized researchers, what is already done and what is still unknown and unstudied and thus provides a background for the development of the study. This may also bring the investigator to the proximity of the solution. It is in this context that studies on instruction through video, interactive video and television both in formal and informal situations of learning conducted in India and abroad are reviewed and presented in the following pages in view of their relevance to the present study.

STUDIES CONDUCTED ABROAD

Massoudi and Symin (1983) studied the development and evaluation of an Interactive Video Computer Program compared with a similar traditional approach. The results of the study showed that there was a significant difference in achievement between the experimental and control groups at 0.05 significance level as measured by the post test. The experimental group performed significantly better than the control group. Also the tests showed no significant difference between males and females in either type of treatment. Students in the experimental group voted the interactive video computer program as a positive experience and a more effective learning tool.

Andrews, Kenneth Gerald (1985) studied the effectiveness of instructional feedback provided by interactive videodisc instruction. The use of interactive videodisc technology as an instructional medium was compared to a traditional lecture/videotape presentation involving the learning of a complex medical task. The results of two achievement tests (post test and sequence test) were used to compare the groups. For
both tests the four videodisc groups and the control group achieved significantly higher results than the no treatment group. The use of video feedback was shown to be slightly more effective than the use of verbal feedback, particularly for higher video relevant items, and the use of frequent interaction was shown to be in some cases significantly more effective than infrequent interaction.

**Corbett, Julie Webb** (1985) studied the effects of cognitive ability and television viewing habits on achievement following mediated instruction. It concludes that when comparing the effects of video learning, audio learning and narrative learning with the preliminary reading and listening tests, the subjects receiving the video treatment scored significantly higher than the total sample. The relationship between reading comprehension and achievement from narrative learning showed a moderate amount of correlation and the relationship between auditory memory and achievement was slightly lower than the results obtained from reading comprehension. The relationship between age, sex, race and educational level following mediated instruction revealed no differences for sex but differences in learning in the age groups, races and educational level.

**Abrams, Arnold** (1986) studied the effectiveness of interactive video in teaching basic photography skills. The purpose of the study was to assess the effectiveness of interactive video in the teaching/learning process. More specifically a comparison was made of the relative effectiveness of interactive video and linear video as delivery modes in the acquisition of basic photography skills in an independent learning environment at college level. Results indicated that the IV group recorded significantly and consistently larger achievement gains than did the LV group. It is also concluded that interactive video instruction, if carefully designed and implemented, can be a very powerful and effective method of instruction from the view points of both achievement and attitude.
Armstrong, George Blake (1986) conducted a study on 'Television as taught-inhibitor: effects of background television of cognitive performance'. The findings of the study reveal that children may perform more poorly if they habitually watch TV while doing homework, studying, reading or engaging in other intellectually stimulating activities.

Chambers, Jerry Ray (1986) conducted a historical study of Missouri instructional television from 1953 to July 1, 1985. It concludes that video and computer technologies should lead to new applications in the classroom, new delivery systems and new opportunities. Yet the old problems of uncertain funding and unproven benefits to student achievement and learning will continue to exist.

Hayens, George Randall (1986) conducted a study on 'Laser videodisc: a historical perspective with contemporary educational applications'. It concludes that interactive technologists have the potential to overcome the elitism that continues to prevail in our school system today. Hopefully this treatise will facilitate and expedite the implementation of this medium into additional learning environments.

Peterson, Donna (1986) studied the effect of video assisted instruction on student achievement and attitude in first grade math. The findings indicate that the video assisted instruction was as effective as live instructions in terms of student achievement. Students in the video assisted group also made significant long term positive gains in their attitude toward mathematics.

Wicklein, Robert Carl (1986) studied the effects of learning styles and instructional sequencing of program controlled and learner controlled interactive video programs on student achievement and task completion rates. The results of the study indicated that in all but one measurement, there were no significant differences between
the dependent variables of this study (achievement test scores and task completion rates). There was a significant difference in task completion rates between the two interactive video programs. Based on the results of the analysis, it is concluded that the program controlled interactive video programmes should be considered the more appropriate design strategy for the particular type of training.

**Wiesner, Peter** (1986) conducted a study on `Communication in distance learning: an exploratory field study of adults enrolled in telecourses offered by New Jersy Community Colleges'. It concludes that telecourses and other technology-based instructional system might hinder intellectual growth by eliminating the opportunity for contact.

**Silverstein, Mark Alan** (1987) attempted to study on `Social interaction analysis of elementary school students and a level one videodisc system in an educational environment'. Results indicated that the patterns of behaviour most often suggested the presence of active acceptance. Implications of this study for educators include the recognition that student apparently actively engage the videodisc system in an accepting manner.

**Douglas, Patricia Jeanne** (1988) studied the effectiveness of interactive satellite delivery versus traditional delivery in selected courses. The study revealed that (i) courses presented on the CENET (Corporate Education Network) were equivalent to the same courses taught in the traditional manner in terms of knowledge gained. (ii) courses presented on the CENET were perceived by the students as being of equal value as classes taught in the traditional manner, in terms of content, teaching, objectives, interaction, graphics and exercises.

**Khanyile, Emmanuel Bafana** (1988) studied the effects of television as an adult education medium in moderation of Zulu culture. This study concludes that adult
education is essential in order to modernise a community such as the Zulu community. Every community including the Zulu community should be a learning society, if possible using television as a medium. The positive results obtained in this research also pointed to the fact that group viewing is effective as a learning process.

**Lashley, Lynette Margaret** (1988) conducted a study on disseminating agricultural information to farmers in Trinidad and Tobago through television. A comparison of the two groups of farmers revealed that both groups of farmers reached parity on seven out of the 10 questions on the post test. The results of the main group in this study viz. the pasea-macoya farmers, show that there was significant improvement in the correct number of responses on the post-test in comparison with those of the pre test. The television program undoubtedly was responsible for the increase of the agricultural knowledge of this group. Television, therefore, has been proven to be a viable medium for disseminating agricultural information to small farmers in Trinidad and Tobago.

**Van Rooyen Maree Anina** (1988) studied television as a medium in the provision of non formal educational needs of whites in the Republic of South Africa. This study concludes that a relevent educational television program that is aimed at providing for specific learning needs of adult learners cannot be developed unless the needs of the target groups are identified in advance of planning and development.

**Brund, Earlese** (1989) conducted a study on `Map literacy: designing an instructional videotape to teach map, reading skills to high school students'. This study reveals that a significant increase in students academic performance, a more positive attitude toward map-reading, and a tremendous liking for the use of VCR in classroom.

**Cemiamo,Katherine Sears** (1989) studied the relationship of preconceptions and the effects of interactive and covert practice in the context of video-based learning. The
findings of the study indicate that learners who are provided with an interactive video lesson that includes practice questions and feedback recalled significantly more information than learners who receive lesson on television without practice questions or feedback.

Dawson, Bruce Alan (1989) studied the effectiveness of interactive video simulation in teaching discipline theory to preservice teachers. It concluded that interactive video simulations can help preservice teachers learn discipline theory. The premise that interactive video simulations can be beneficial in equal measure to either sex is supported. The personality factor seem to play little or no role in the ability of preservice teachers to learn discipline theory with the aid of interactive video simulations.

McNeil, Barbara Jean (1989) attempted 'A meta-analysis of interactive video instruction : A 10 year review of achievement effects'. It reveals that traditional forms of instruction should not be totally abandoned for IV. Findings imply that IV can be useful as an alternative strategy for group-paced learning, and a supplement to traditional instruction. Combining video learning with computer technology does not necessarily constitute effective IV. Users and evaluators of IV must pay attention to instructional methodologies and design elements built into such programs.

Steele, David Brooks (1989) conducted a study on the effects of non programmed, non remediated and interactive videotape instruction on the achievement of ninth-grade students. Results showed a significant difference among post test means at the .0001 level. The control group showed a 1.5 per cent increase in achievement from pre-test mean to post test mean. The non programmed group showed a 46 per cent increase from pre-test mean to post test mean. The non remediated group showed 80.16 per cent increase from pre test mean to post test mean and the interactive group showed a 151.27 per cent increase from pre test mean to post test mean.

49
Anyanetu, Patrick Emeka (1990) studied the video cassette recorder (VCR) as an optional extension service delivery tool. The purpose of this study was to examine the potential of the video cassette recorder (VCR) as one alternative for delivery extension services to the Co-operative Extension Service Clientele in a changing information environment. This study reveals that the majority of VCR users perceive it as a means of improving skills and acquiring more agricultural competencies in the privacy of their farms.

Katkanant, Chanida (1990) studied the effects of using interactive videodisc laboratory simulation on problem-solving and learning performance of high school chemistry students. This study revealed that the IVD group had significantly higher scores on problem solving strategy and spent less time in completing an experiment. Findings from the study demonstrated the benefits of using the IVD laboratory simulation in facilitating students' problem solving performance and saving learning time. It also indicates that IVD simulations could be a promising alternative to supplement and/or enhance laboratory instruction, especially for teaching complex expensive and time-consuming laboratory techniques.

Learmont, Donna (1990) studied the affective differences between host-site and remote-site distance learners participating in two-way interactive television classrooms for high school course credit. Results of the study showed that there were some general affective differences between host site and remote-site students and that there were some statistically significant affective differences between groups of students related to personal contact with the teacher, teacher feedback and perceived cognitive achievement related to the amount of time the teacher spent with the students. There were no statistically significant group differences attributable to teacher control and discipline.
Nixon, David Earl (1990) studied the learning outcomes of the post-secondary students in an interactive video at an Iowa community college. The purpose of the study was to compare learning outcomes of post secondary students who were enrolled in various liberal arts and science courses for one full semester as a measure of effectiveness of simulteaching via two-way interactive television. The learning outcomes at the origination site with the simulteacher present were compared to the learning outcomes at the remote sites where the instruction was received by interactive television. This study concludes that simulteachers can deliver instruction as effective to students via interactive television located at remote sites, as to students located face to face with the simulteacher at the origination site.

Sehley, Nancy Minnie (1990) studied the differences between expositive and experential strategies of instruction in an interactive video course on word processing. The results of this study are as follows. There is no significant difference in student mastery through two different instruction paths in an interactive video course. There is also no significant in mastery difference between subject with different learning styles within each lesson path or between the subjects with the same learning style but different instruction paths. It is also concluded that the experential strategy is more efficient in terms of subject time of course completion than following the expositive strategy.

Sen, Abhijit (1990) studied on the impact of the INSAT-TV agricultural programs on the farmers in six Indian villages. The study reveals that awareness was significantly correlated with exposure to the TV programs whereas comprehension was more highly correlated with exposure to different types of media than with any specific types of TV programs. Awareness was correlated with agriculture production only in the villages without a community TV set. The agricultural programs did not play a major role in agricultural production but television and television programs were having a significant
but unquantifiable effect within the village society. The INSAT programs may be criticized for being highly centralized and controlled. One of the problems is that quite often these programs are not relevant to the targeted farmers and very often the language of the message is incomprehensible to them.

Stafford, Janice Yvonne (1990) studied the effects of active learning with computer-assisted or interactive video instruction. It concludes that retention was significantly higher for instruction presented with interactive video as opposed to computer assisted instruction. It is also found that higher effect size results were obtained for Control/Experimental contrasts between media presentation (passive interactive, high-low interactive) than for contrasts between traditional instruction and media instruction.

Ziegler, John Herman (1990) studied the effect of interactive video on learning perceived effectiveness and user attitudes in academic library orientation programs. The purpose of this study was to determine if there were any significant differences in recall learning, perceived effectiveness and preferences scores between groups using interactive video with learner control, linear interactive video and conventional tours to orient themselves to an academic library. The results indicated that the interactive video with learner control treatment group significantly outperformed both the linear interactive video treatment group and library tour group in both recall learning scores and perceived effectiveness scores. It was suggested from the results that increased learner control within an interactive video format in the library orientation yields significantly higher recall learning and perceived effectiveness scores than a library tour or a linear interactive video program.

Bennett, Beverly Jean (1991) studied the influence of television from an African-American male perspective. Results of the study indicate that television was an influence in the lives of the African American males. Although the respondents considered television
programmes to be unrealistic, they still had an impact on the aspirations, values and attitudes of the young men.

**Emmans, Cindy** (1991) conducted a study on 'Interactive Video laserdiscs: a skills analysis for educating educators'. The findings of the study revealed that the best way to educate educators in the use of IVD technology would be first through one or more formal workshops. The most important aspect of training, however, is adequate time for individual interaction and practice with the equipment.

**Hall, Artie** (1991) conducted a study on 'Interactive Television Instruction: effects of minimodule instructional design on reaction and achievement'. This study compared the effects of traditional and minimodule instruction delivered through an interactive television system in an industrial setting. Effects upon the students attitude and achievement were evaluated. The instruction was a series of minimodules versus traditional lecture style delivery. This minimodule approach focused on increasing the frequency of dialogue between the student and the instructor using a structured format. The analysis of the data indicated significantly higher achievement and more favourable student reactions for the minimodule treatment.

**Hrecz, Rita Arlene** (1991) studied the impact of an interactive video disc and role playing strategies on student learning and attitudes about substance abuse as taught by preservice teachers. The results showed that there was no significant difference in learning between interactive video disc groups and other groups.

**Jaw, Jiunn-Jyh** (1991) studied the impact of television on Chinese students' values. This study revealed that if television did have an impact on Chinese students' acceptance of American values, this impact was likely to range from being mild to
moderate. However, respondents' gender and meaningful interaction with Americans might influence televisions impact on respondents' acceptance of American values.

Leitner, Rona Karan (1991) compared the effects of reading comprehension of educational video, direct experience and print. This study revealed that the educational video was more effective when compared to traditional lesson for all ability levels (effect size, d=0.5), the video lesson generated a larger effect size than the hands on lesson for low ability readers (d=0.69) and there was no difference in the effect between the video lesson for low ability readers and the traditional lesson for high ability readers (d=0.29). The video lesson generated a higher mean score for all ability readers than the hands on lesson, but the findings only approached significance (d=0.40). In addition, 24 per cent of the variance was explained by ability level, 5 per cent by the treatment and 2 per cent resulted from an interaction between the treatment and ability level. Overall the study offers some support for the use of educational video as a prereading activity to provide prior knowledge and thereby increase reading comprehension particularly for low ability readers. It also demonstrated that educational video may be used as a substitutes for direct hands on experiences.

Libler, Rebecca (1991) studied the effectiveness of interactive television as the primary mode of instruction in selected high school physics classes. The results of the study revealed that students in the interactive television classes generally held positive attitude towards the content of physics.

Mason, Lynn Merrick (1991) studied the effect of interactive video simulated chemistry laboratories on learning outcomes and attitudes of students enrolled in a beginning college chemistry laboratory course. The study found that students were able to achieve knowledge of laboratory safety procedures and the experiments via interactive video simulated chemistry laboratory experiments, without a decrease on attitude. Field
independent learners did achieve better than field dependent learners. Beginning general chemistry laboratory classes would profit from a mixture of traditional laboratory and interactive video simulated chemistry laboratory experiments.

*McWhirter, Michael Edwin* (1991) studied the effect of level of one videodisc technology on sixth grade student achievement in science. The effectiveness of a level one videodisc instructional format as opposed to a traditional textbook instructional format on sixth grade students' performance in science on a two week unit of weather was the primary focus of this quasi-experimental study. The significant conclusion associated with this study was that a level one videodisc instructional format can influence student achievement in science.

*Meshot, Carole Jean* (1991) conducted a study on 'Interactive Hypermedia a comparative study of the effects of real-time motion videodisc versus still frame and of cognitive style on Cetacea Animals Knowledge Test for second grade students'. It concludes that there were no difference between hypermedia still frame and real-time motion treatment sub-groups and no interaction effects between cognitive style field independent and field dependent dimension and hypermedia still frame and real time motion presentation treatment.

*Obermier, Timothy Ronald* (1991) studied the academic performance of video-based distance education students and on campus students. It reveals that (i) academic performance does not differ between graduate students receiving their instruction via video-based distance education techniques and graduate students receiving their instruction via the traditional on campus instructional method. (ii) students of video-based distance education instructional delivery perform as well as their on campus counterparts. (iii) graduate students of video-based distance education do not differ in their academic performance as compared to on campus students in the discipline areas of natural sciences.
engineering and business (iv) those students who submit GRE and GMAT scores for admission significantly outperform those students whom for whatever reason do not submit admission scores yet are accepted for graduate study and (v) GRE scores, GMAT scores, gender, age and discipline area do not serve as good predictors of graduate student academic performance for graduate students of on campus classes with a teleclass component and the graduate students of the teleclass component.

Boyd, Sandy Anne (1992) conducted a study on training effectiveness of interactive video systems for the use of lethal force decision-making. This study investigated trainees' perceptions of training effectiveness of interactive video system as compared to other types and methods of training that have been used in the past for training use of lethal force decision making. This study concludes that the respondents gave a very positive indication of their perceptions of training effectiveness of interactive video for use of lethal force decision making. When compared to past training experiences, interactive video was perceived as more effective than any other training method listed. This research provides important data regarding the perceptions of training effectiveness while using interactive video systems. The opinions and perceptions of the professionals being trained using this relatively new and innovative technology will serve the profession well as they continue to enhance and reform old and sometimes outdated methods of training for the use of lethal force decision-making.

Dawson, Val Wallace (1992) studied the student mediation styles, satisfaction and achievement in an electronic distance education environment. The study results support the notion that a student taking university classes in an Electronic Distance Education (EDE) environment can achieve and experience course satisfaction regardless of his or her mediation style or his or her teachers style. The study's practical findings help confirm the effectiveness of EDE delivery systems in higher education.
Hart, Paul Douglass (1992) conducted a study on 'Interactive video: strategic implications for self-directed training'. The aims of the study were to compare the effectiveness of an existing interactive video network at Federal Express Corporation with alternative forms of self-directed learning as demonstrated through job knowledge gains and to determine if individual and demographic employee characteristics could influence the level of IVI usage. A comparison of the mean scores for empowerment found a statistically significant difference between the Non-IVI/IVI groups. The IVI group had a higher mean score.

Rutherford, Andrena Jane (1992) compared the training personnel interviewers with computer-based interactive video and video. The results of the study indicated that interviewers in the video group achieved significantly higher performance scores on their mock interviewers. However interviewers in the CBIV (computer-based interactive video) group scored somewhat higher on scales which assessed cognition and self-concept. The main treatment effects of locus of control and experience in relation to level of performance were not interpretable due to interaction between the variables.

STUDIES CONDUCTED IN INDIA

Mishra et al. (1967) studied the impact of TV on farmers. It was found that the significant increase in the farmers knowledge about the content of telecasts varied from programme to programme from 10.12 per cent to 23.15 per cent. With regard to telecast dealing with improved agricultural practices, the increase in the knowledge was found to the extent of 20.27 per cent.

Dey (1968) studied the relative effectiveness of Radio and Television on mass communication media in dissemination of agricultural information. It was found that farmers gained on an average of 31 per cent knowledge over a base line with an average
retention of 24 per cent and 19 per cent after lapse of 15 and 30 days of telecast respectively.

NCERT (1968) in an evaluative study of seven agricultural telecasts found that the televiewers gained significantly higher knowledge about the message as compared to their counterparts who did not view the telecast.

Sekhon (1968) studied the effectiveness of television as a medium of communication for imparting technical know how to the farmers. It was concluded that 45 to 62 per cent of knowledge was increased due to farm telecasts among farmers of Delhi.

Dey and Sharma (1970) studied the relative effectiveness of radio and TV on mass communication media in dissemination of agricultural information. It was found that TV was significantly more effective than radio in case of all the radio programmes with respect to gain in knowledge. However, there was no reduction of knowledge with a lapse of time in case of both media.

Nagarajan and Selvam (1976) attempted a pre-operative survey on TV viewing and community learning needs. The main findings of the study had provided information to programme planners on the usefulness and effectiveness of the existing TV programmes. The study implied some alteration in the plans of producing adult education programmes.

Roy (1979) studied the cognitive effects of the ETV programme broadcast by the Delhi TV centre. This study revealed that the students were not having the overall cognitive effects out of the TV lessons.

Agarwal and Rai (1980) conducted an evaluation of SITE. It was found that on the whole, women gained more knowledge from TV viewing in area of agriculture, health and other areas of their interest when compared to men.
Sachidananthan (1980) studied farm telecast viewing behaviour of small farmers. Two-thirds of the respondents were found to have a significant change in post-viewing the farm telecast programme as compared to the previewing behaviour.

Krishnan (1983) attempted a study on development of multimedia package for teaching a course on audio-visual education. This study revealed that (i) Ninety-eight per cent of the trainees obtained more than 80 per cent of the marks on the final post test. (ii) The mean gain in the total scores for all the modules was found to be significant at 0.01 level. (iii) The mean gain scores of knowledge, understanding and higher mental abilities were found to be significant at 0.01 level. It was concluded that the multimedia packages in modular form could be used for training programmes in vocational institutions.

Seth Indu (1983) studied the effectiveness of educational television on the educational development of primary school children. The study generated the following findings; (1) Language development of children exposed to educational television was higher than those not exposed to educational television. Language development among children exposed to educational television along with intervention of programmes was higher than those exposed to educational television alone and those not exposed to educational television. (2) The education television group was found higher on acquisition of information related to educational television programmes than the non-educational television group. The educational television group with intervention was found higher on acquisition of information related to educational television programmes than those exposed to educational television alone and those not exposed to educational television. (3) The scholastic achievement of students exposed to educational television programmes along with intervention was higher than the educational television and the non-educational television groups.
Tanwar Taruna (1984) study in new technologies and culture industry revealed that VCR could also be an effective tool to train farmers of Krishi Vigyan Kendras, (Farmer's Training) Centres and it could be effectively used under training and visit system of extension for training extension functionaries and farmers. Further at village level, community viewing of VCR was possible by operating video clubs, for educational and developmental purposes by government and voluntary agencies.

Wad (1984) studied the scope of communication media such as radio, television in education at high school level in Maharashtra State. This study concluded that the need of communication media in the teaching-learning process had been felt by the teachers and parents also, yet the radio and TV programmes have not attained a much value in the learning process. The teachers teaching in the rural areas were more keen on using radio and TV programmes in the learning process. They were keen on using these media in the learning process if the syllabus to be completed was not heavy.

Knade (1985) studied the impact of instructional television on the behaviour of rural elementary school children. The creative behaviour of the elementary school children in the rural setting was found to be positively influenced by their exposure to instructional television.

Mruthyunjayam (1987) made an attempt to analyse the farm telecast programme. It was found that majority of the respondents were in average gain in knowledge in case of rice, maize and groundnut crops. The mean gain knowledge score indicated a significant gain in knowledge by respondents in all the three form telecasts.

Bhagat and Mathur (1989) found that majority of the farm women realised that TV helped to change their attitude towards urban life and provided knowledge on new developments and awareness among current prices.
Danabagyam (1989) made an attempt to study the effect of video assisted instruction on pupils' achievement and attitudes towards learning in Botany at higher secondary level. This study concluded that television teaching method was better than the conventional method of teaching.

Indrani (1989) made an attempt to compare the retention of science concepts among the students of std VIII learnt through conventional method and video recorded instructional material. This study revealed that VRIM was better than conventional method of teaching the science concepts. The medium of VRIM resembles the real life experience very closely, because of the combination of sound, motion and colour. The retention power is increased by the VRIM because it (1) broadens and enriches the experiences of children. (2) a verbal explanation supplemented by a visual aid is far more effective in attracting attention, creating and sustaining interest than conventional teaching. Presenting a lesson through VRIM adds variety and breaks the monotony of the ordinary instruction. The VRIM lends reality to the class room teaching and links instruction with real life. The mental images created by the pictorial stimuli and models are easy to recall because of the intense interest at the time of reception.

Lakshmipathiraju (1989) studied the use of instructional material and television in teaching science in secondary schools. This study revealed that the programmed instructional material in the form of Book Format and Television Programme were found to be a suitable means of instruction for teaching science to the students of Std X in secondary schools. The television lesson programme was found to be superior to the Book Format Programme so far as the time taken for instruction was concerned.

Selvaraj (1990) studied the effectiveness of video teaching on farmer's affective, cognitive and psychomotor behaviour. This study revealed that the selected modes of video exposure namely (i) Documentary (ii) Discussion and Dramas were effective in
disseminating the technology related to the management of Heliothis pest on cotton with considerable variations in their effectiveness of knowledge gain by the subjects and the farmers acquired skill in Heliothis management.

**Purushothaman and Stella (1991)** made an attempt to study the instruction through interactive video. It reveals that the experimental group which was exposed to the IV techniques showed a distinct superiority over their counterparts who were exposed CCTV (non-interactive) techniques and the conventional method of instruction for the control group. The ideal IV system is effective when it is used as a learner-controlled delivery system for individualised instruction. But the densely populated classrooms in India may have to choose the teacher controlled IV system in which the learner interacts with the video through the teacher. Thus, it becomes a teacher-demonstration of an IV system controlled by the teacher himself/herself who generates instruction for development of skills.

**Kiran Jaiswal and Sandhya Jaiswal (1992)** studied the child development through television. It reveals that the TV programmes for children were effective in terms of understanding and reaction towards TV programmes.

**Purushothaman, Shanmugasundaram and Stella (1992)** studied video assisted instruction in English language teaching. This study proves that Video Assisted Instruction is a potential instructional technique in improving the skill of pronunciation in English. But it should be borne in mind that in this study both Audio and Video assisted instructions were used not as individualised technique but for group instruction where the teachers role is important. In group instructions the effective use of these technique depends very much on the competency and the enthusiasm of the teacher. Based on the assumption that the teachers are competent in using these techniques for group instruction, this study proves
the supremacy of Video Assisted Instruction in developing the skill of pronunciation in English Language Teaching.

**Rajaguru (1993)** studied the effectiveness of video assisted instruction on the achievement of slow learners. This study revealed that the male slow learners of those groups (Video assisted instruction and Conventional teaching group) were alike in immediate retention. Whereas female slow learners of video assisted instruction group performed better in immediate retention than conventional learning group.

**Balasubramanian and Charles Enigo (1994)** studied the effectiveness of instructor controlled interactive video in agricultural extension. It revealed that Instructor Controlled Interactive Video was more effective in modifying the cognitive behaviour among farmers when compared to lecture method and conventional non-interactive video.

**Mallick and Sahoo (1994)** studied the effectiveness of school level ETV programme with and without talkback facilities in terms of achievement of rural background students. It is found that with regard to the post-test scores, ETV + Talkback group had slightly higher achievement than the ETV without talkback group students. It also revealed that there can be several programmes on which ETV can bring significant positive effect on students achievement whether they are supported by talkback based interaction facilities or shown to students as one way communication without having feedback.

**Balasubramanian, Charles Enigo and Philip (1995)** made an attempt to study the effectiveness of Instructor Controlled Interactive Video and other teaching strategies in the context of video programmes with varying formats in agricultural extension. It was found that Instructor Controlled Interactive Video was more effective in Agricultural Extension as compared to other group communication strategies. This study also revealed
that Instructor Controlled Interactive Video is more effective in modifying the cognitive behaviour at knowledge, understanding and application levels when compared to Conventional Non-interactive Video and Lecture Method in the context of the video programmes of documentary in format.

Sahoo and Mallick (1995) studied the attitude of students of higher education towards educational television. The study reveals that there exists significant difference between the undergraduate students of urban and rural areas. The rural area college students expressed low positive attitude towards ETV. It reflects on the value of ETV as a distance education mode among rural area students. ETV proves to be an effective mode of instruction among those who are deprived of appropriate facilities for face to face interaction with subject experts. Even though urban students have positive attitude towards ETV, they do not rate ETV's significance at higher level as rural students do.

DISCUSSION

The review of studies on instruction through interactive video, television and conventional non-interactive video both in formal and nonformal situations of learning conducted in India and abroad not only brought the investigator to the proximity of the solution to the problem in hand but also made him familiar with the summary of previous studies, the writings of recognized researchers, what is already done and what is still unknown and unstudied and thus provides a background for the development of the present study. It is witnessed that the different instructional media reveal differential effectiveness in realising the instructional objectives in differential learning situations. The discussion presented here attempts to study the relative value of the studies reviewed and their significance to the problem in hand. It not only brings out a synthesis of these studies within the literature but also furthers our understanding of the value of video in agricultural education.
The major observations of the review of studies are highlighted as follows:


Interactive video as a medium of instruction is as effective as other instructional strategies (Douglas, 1988; McNeil, 1989; Nixon, 1990 and Sehlez, 1990).

Interactive video as a medium of instruction is not effective in instruction (Wicklein, 1986 and Hall Arlie, 1991).

Television as a medium of mass education is effective in achieving the envisaged objectives of educational programmes (Khanyile, 1988; Mruthyunjayam, 1989; Dey and Sharma, 1990; Bennett, 1991; Jaw, 1991; Libler, 1991; Sahoo and Mallick, 1995).

Television as a mass communication medium in dissemination of agricultural information is effective (Mishra et al., 1967; Dey, 1968; Sekhon, 1968; Lashley, 1988; Bhagat and Mathur, 1989 and Sen, 1990).

Television as a medium of mass instruction is not effective in achieving the instructional objectives (Van Rooyan, 1988 and Roy, 1989).

Conventional video is more effective when compared to other instructional strategies (Brund, 1989; Danabagym, 1988; Indrani, 1989; Anyanetu, 1990; Leither, 1991 and McWhirter, 1991).
Conventional video is as effective as other instructional strategies (Obermier, 1991 and Purushothaman, Shanmugasundaram and Stella, 1992).

Selected modes of video exposure are effective in disseminating the technology related to agricultural practices with considerable variations in their effectiveness of knowledge gain by the subjects (Selvaraj, 1990).

Instructor controlled interactive video, an indigenous model, quiet suitable to Indian condition, is more effective when compared to traditional instructional strategies in realising the instructional objectives (Purushothaman and Stella, 1991; Balasubramanian and Charles Enigo, 1994 and Balasubramanian, Charles Enigo and Philip, 1995).

Adoption of new approaches to communication has produced significant innovations in development communication. Video media having a number of salient characteristics, serve an important and valuable function in stimulating people’s interest in new ideas. Once stimulated or made aware of, they may seek more information from different sources.

The use of video should be coupled with opportunities for consolidating major learning points. The video should satisfy the content experts, offer ideas for teaching strategies and involve learning strategies that lead to successful outcomes for target population. In any learning situation using video, sustained attention is required on the part of the viewers. The strength of the video is that it provides an experience which is concrete and often perceived by the learners as being fuller and more realistic portrayal when compared to other media. Video should encourage a depth of understanding by providing material that stimulates thought and problem solving. Remedial learning from video demands the instructor in ensuring that the learned have sufficient support to
practice and consolidate the learning. Healthy learning situation using video is one where the individuals feel relaxed about airing their views and interpretations in the groups. The degree of challenge in learning the content of the video programme can be defined as the extent that individuals must improve on their existing level of knowledge and skill to reach up to and beyond the minimum level of achievement. The relationship between the use of video and the achievement of learning outcome needs explicit expression.

Hence it is evident that video media in agricultural education create readiness among the farmers for involvement in the teaching-learning process besides providing clarity, provision and accuracy of the message discussed. The knowledge of the objectives of the video programmes and the desired outcomes would help the instructor in selecting the best programmes for instruction. It is obvious that the video programmes matching with the learning styles of the participants besides ensuring the aptness of the content would assure effective realisation of the instructional objectives of the agricultural educational programme. Care should also be taken with regard to cost effectiveness, cultural issues related to the media and the physical and emotional needs of the learners while selecting the instructional media for the given target population. Keeping all these observations in mind, the design of the present study was finalised.

CONCLUSION

From the review of related literature the investigator understands that a substantial body of empirical studies finds that video mediation has significant advantages in achieving the envisaged objectives of instruction both in formal and non-formal situations of learning. Effective findings from comparison group studies range from mildly negative to extremely positive. It is also understood that video mediation has been found to improve learners' attention as well as retention. The studies on video-aided instruction conducted abroad project that video, particularly interactive video, is an effective medium in
instruction. But at the same time, in the Indian context, much of the potentiality of the video as modern instructional medium needs to be verified against empirical data on actual research findings. There is room to presume that technology improvements result in more effective applications equally in the field of both formal and informal situations of learning.

The review of literature presented here guided the researcher to design the study reported in this thesis and to explore more insights in the area of interactive video in agriculture.