CHAPTER - ONE

INTRODUCTION

One of the chief, if not the most important factors which promote development is the mobilization of human resources. This is possible only when a country augments educational services among its people. Education is a necessary condition for progress in any type of society, be it developed or developing. It can be imparted through many ways, one of these being mass media, which can be considered as the use of communication instruments to expand education. The mass media not only provide information and entertainment but they also present directly, as well as, indirectly many opportunities for people to be better educated. Of the various media used to propagate education, television in particular, is an important medium of communication that demands a major share in educational endeavours towards enhancement and enrichment. However, there are always questions about the level of success of education through television vis-a-vis other methods and instruments of instruction. This study is an attempt to evaluate the efficiency of television education programmes in a university of a developing country, viz., Iran.

Development

The concept of development has evolved since World War II into a dynamic one taking within its orbit almost every aspect of human existence, for, in fundamental meaning all development is human development. The focus of development is the human being and the quality of his/her life. However, the traditional concept of development overlooked this human factor. Having been inspired by the western industrialization process, the concept was initially restricted to an almost exclusive concern with a narrowly conceived economic dimension and to reliance on a typically
western market-oriented model of industrialisation and growth. The stress was on modernization imposed from above at the expense of tradition and culture. The human aspect of development was totally ignored.

New dimensions were added to the original concept in the fifties. The social dimension was given prominence through such aspects as health and education. But focus on notions such as functional literacy revealed that the concept of development was still dominated by economic growth theories and aspects like rural development and communication were yet to be given serious thought to. From the seventies, however, the development concept was redefined and broadened through the addition of first, the ecological dimension and then of the other features like population, food, employment and lastly, science and technology including technology transfer. In keeping with the trend towards more holistic paradigms, there is a growing recognition of still another crucial facet, the cultural dimension, or seen from another angle, the communication and information dimension.

All the above connotations of development, however, failed to highlight a vital point, namely, the human aspect. According to Julius Nyerere, “Development has a purpose, that purpose is the liberation of man..... we talk a good deal about economic development, about expanding the number of goods and services and capacity to produce. But the goods are needed to serve man, services are required to make the lives of men more useful, as well as, more fruitful. Political, social and economic organization is needed to enlarge the freedom and dignity of man. Always we come back to man - to liberated man - as the purpose of activity, the purpose of development” (cited in Jotwani, 1987).

**Human Resources and Development**

Since development is centered on people, education of the masses must be
an essential input in any development effort. Development projects can not be forced on the public without the understanding, appreciation and participation of the persons, whom they are meant to serve. Today we can not conceive of any development without human training and human resources. Most economists would probably agree that it is the 'human resources' of a nation, not its capital, nor its material resources that ultimately determine the character and pace of its economic and social development. According to Frederic Harbison (1973) human resources constitute the ultimate basis for wealth of a nation. Capital and natural resources are passive factors of production. Human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organizations and carry forward national development. Clearly, whichever society is unable to develop the skills and knowledge of its people and to utilize them effectively in the national economy, will be unable to develop anything else. And the principal institutional mechanism for developing human skills and knowledge is the formal educational system. In fact, most third world nations have realized that it is the rapid quantitative expansion of educational opportunities which holds the basic key to national development. The more the education, the more rapid the anticipated development.

Education and Development

The linkage between education and development is a two-way process. By reflecting the socio-economic structures of the societies in which they function (whether egalitarian or not) education systems tend to perpetuate, reinforce and reproduce that economic and social structure. On the other hand, educational reform, whether introduced from within or outside the system, has great potential for inducing corresponding social and economic reforms in the nation as a whole. According to Harbison (1973) the progress of a nation depends first and foremost on the progress of its people. Unless it develops their spirit and human potentialities, it can not develop much else materially, economically, politically or culturally.
The basic problem of most underdeveloped countries is not a poverty of natural resources but of the human assets. Hence, their first task must be to build up their human capital. To put it in more human terms it means improving the educational skills and hopefulness and, thus, the mental and physical health, of their men, women and children. Educational skills and hopefulness implies what they know, what they can do and the attitudes they hold towards national development. In general, these are respects in which the people must change before the nation can change and it is not possible unless the state augments education.

The relevance of education has been highlighted by Lerner (1958) as well. He treats education as a prime mover in the process of modernisation and development. Kuppuswamy (1976), too, holds that the development of any society depends upon how far its people are able to participate in the decision making process. And education makes them more capable of being active agents in the development process. Michael Todaro (1977) also mentions that in the present day world the relation between the education system of a society and its development can not be denied. He describes three specific economic components of development, namely, economic growth; absence of inequality and poverty; and internal migration and fertility, all of which are closely related to the educational scene of a society.

Mass Media and Education

It is generally believed that acquisition of information is one of the basic freedom of any nation and in order to have free and adequate information in any country, a competent mass communication system must be developed. Wilbur Schramm (1964), the Director of the Institute of Mass Communication Research at Standford University, while defining the role of communication in national development held that without adequate and effective communication, economic
and social development will be retarded and may even be counter-productive. He adds that with adequate and effective communication the pathway to change can be made easier and shorter.

Men hurtling through space send back radio reports of what they experience, cameras mounted on space shuttles give us close-up television photographs of the moon surface, television programmes are being transmitted from one side of the world to another by bouncing signals off satellites in orbit. Each year brings additional wonders in the craft of communication. With computers and instantaneous transmission systems, we are bending time and space to our will. The mass communication has opened a new dimension to the horizon of human world. By application of various media millions of people have come to acquire new ideas, philosophies, approaches and attitudes. In this scenario, educational broadcasting and telecasting have an important role to play in furthering education and development. Their role is more significant in the context of situations obtaining in developing societies which are faced, on the one hand, with the problem of huge percentage of illiteracy and heavy drop-out rates and, on the other, with the emergent need to provide greatly increased access to informal and non-formal education systems.

Broadcasting and telecasting are generally considered peripheral and have been used sparingly in education. However, it is now being pointed out that new approaches and techniques have to be developed which could perform a two-fold function, first, to enrich the instructional systems and secondly, to enlarge the area of their operation. In preparing for both these functions, educational broadcasting and telecasting should be able to move away from the fixed and pre-determined instructional context emphasizing direct teaching and develop alternative systems of education for the large number of illiterates.
School and teacher form one of the largest items except for industrialisation itself, on the cost sheet of a developing country. The planner’s question is, therefore, how can the mass media multiply scarce resources in this field? Any contribution that modern communication can make to reducing the cost per student taught, raising the efficiency of instruction or extending it beyond present facilities will be an economic contribution of considerable importance.

Various scholars have underlined the importance of mass media in the field of education. One of the seminal works is that of Wilbur Schramm (1964). He found that in Poland the electronic media played a major role in helping to build incentive, raise the accomplishment of people and so forth. The printed media also made a very great contribution by furnishing primers and by printing materials with easy words and adult ideas to bridge the gap between literacy-class reading competence and newspaper reading competence for the new literates. Other patterns of literacy teaching were mentioned at the time of UNESCO expert meeting on literacy in 1962, where 13 of 67 countries, replying to a questionnaire reported that they were broadcasting literacy courses by radio and the same number said that they were providing literacy courses by film.

Different nations have handled these materials in different ways. Schramm’s (1964) report stated that Puerto Rico produced books, several booklets, four issues of a magazine and eight to ten posters annually, all easily readable and geared to assist the development programme. Liberia sold a monthly, called ‘New Day’, written with the 1,200 word vocabulary of the literacy course at extremely low prices. In Northern Nigeria, a group of tabloid news sheets, each eight pages in length have been available for new literates.

In the Indian city Lucknow, Literacy House assembles village libraries of books with simple vocabularies, publishes books suitable for new literates and issues a
fortnightly easy reading family magazine. In other Asian, African and Latin American countries, too, special newspapers have been published once a week or once every two weeks to furnish news in easy to read form, thus inculcating the habit of news reading and civic interest. In still other developing and developed countries existing newspapers have carried columns of material especially written for new literates. Although these and other methods are satisfactory for developing the material, the problem is to prepare material that new adult literates will consider useful and interesting and that will be easy to read without being 'written down'.

The functions of the mass media in literacy learning become important at this stage of the process. They can build interest and provide incentive to learn to read. When the students have been brought into the class, the media can play either a supporting role (as in Poland) or the main role. When the students have mastered the skill enough to read a little on their own, the mass media must supply easy material to bridge the gap from class to formal adult reading.

**Television and Education**

Of all mass media of communication, television has the greatest potential for education. A fundamental characteristic of television according to McCluhan (1964) is that it demands a great deal of participation by a viewer. A person watching television does not and can not remain passive, for all his senses are actively involved collecting and combining the different sense stimuli - the sound, the picture and the totality of the image- into a coherent and meaningful piece of information. The viewer does not receive unified pieces of information from the television set. He assembles them from the data received from several sources. Unlike the film where a spectator in a darkened room is isolated from his environment, the television viewer watches television in the company of others. This makes the medium an important factor in social relationships. This characteristic has enormous implications for education as
well, since because of them television is able to challenge, involve and stimulate the viewer in a way different from any other medium.

Within the last four decades television services have been started in most of the developed, developing and underdeveloped countries of the world. Research studies have been conducted in many countries about the impact and utilisation of educational television programmes. To be more specific the studies regarding utilisation of Education Television (ETV) can be put under the following subcategories, namely, utilisation of ETV in adult literacy courses, in primary and high schools and in college and university.

**Utilisation of ETV in Adult Literacy Courses**

The French National Commission for UNESCO while discussing the contributions that various media could make to the teaching of literacy, advanced the general hypothesis that literacy in the developing countries must be regarded as a practical matter and indeed, as a means to an end. The countries with mass parties and with literacy already fairly well advanced have generally found it easier to concentrate a large number of people on the job of teaching others to read than to devise other campaigns. In Poland for example, the electronic media played a complementary role helping to increase motivation, raise abilities and so forth. The print media, too, made a significant contribution by providing primers and by printing materials with easy words and adult ideas to narrow the gap for new literates between their ability to read newspapers and literacy class material. But the chief information channel was the volunteer teacher who taught the illiterate the letters and the phonetics and monitored their early efforts to read and write. A second pattern is to leave the whole job to the school. This means that many of the children will learn to read, but few adults will. The printed media will furnish the indispensable primers and readers, and there may be some help from films, radio or television. But here
the chief information channel is the school teacher.

Television however can be an appealing vehicle for literacy teaching since it can present sight and sound together and because it is new enough to be especially appealing. The most extensive test of television as a vehicle of literacy teaching was made in Italy in the 1960s (Schramm et al., 1968). In order to make its two million illiterates literate, a television programme called "Its Never Too Late" was telecast. To break down the resistance of adult illiterates efforts were made to provide an education programme which would not embarrass or offend them. Apart from the television teaching by an expert teacher, some reading material was also made available and a teacher was stationed at each class meeting place to clarify things and answer questions. The programme was found to be highly successful in motivating the people to become literate (for details see Appendix A).

When the students have been brought into the class the media can play either a supporting role (as in Poland) or the main role (as television does in Italy). When the students have mastered the skill enough to read a little on their own the mass media must supply easy material to bridge the gap from class to normal adult reading. The third world experience in using TV for literacy and adult education is very interesting. According a UNESCO survey on "Radio Television in Literacy" conducted in 1989 it was seen that the second half of the sixties saw the expansion of TV services for adult education. As many as twenty one countries were using TV for adult education at that time.

The Jamaica literacy project used TV for motivation/information, reading, word building and writing (Jotwani, 1987). Short films were being used for motivation and information, and animation films were being used as a break between the different parts. Word games, crossword puzzles, captions and all kinds of non projected visual aids were also being used in the TV programmes.
The "television literacy campaign" of Yugoslavia during its 7 years life span, used the television spelling books to encourage the learners to learn to use the written language and for the operations of elementary arithmetic, history, marriage counselling and other information (Schramm et al., 1968). Tunisia's teaching of adults and social education by radio and television organized by its Institute of Adult Education and Tunisian radio and television had the following courses in TV, namely, reading, arithmetic, history, geography, civics and religious instruction, family milieu, occupational and social milieu and the study of world problems (Schramm et al., 1968). In Algeria, TV was used for direct literacy teaching through suitable film programmes in the various formats presented by a screen teacher.

In the sixties, education TV programmes were also organized in Niger, Samoa, Columbia, El Salvador, Senegal and Ivory Coast (for details see Appendix A). However, the enthusiasm for educational television (ETV) services as a direct teaching tool for adult education has waned in the third world, and many countries have abandoned or restricted ETV in favour of lower cost media systems such as radio, film and print. Many societies like Tanzania deliberately decided not to invest in a television network. The decision to limit ETV has been based on experience. Getting the hardware production and transmission services in operation was a one shot activity for which funding was available. But international agencies were less willing to invest in the necessary facilities and training for ongoing indigenous programme production. More than just hardware was needed and it was not easily available to the less developed societies.

Utilisation of ETV in Primary and High Schools

Every school system in the world depends on printed materials and audio-visual aids are used to the extent that schools can afford them. As far back as 1942 a Chilean experiment radio school went on the air supported at first by advertising
on a commercial station. Its function was primarily enrichment of curriculum, but it soon branched out into extension broadcasts on such topics as "Knowing Our Children", "Education For the Home" along with programmes for teachers and other professionals (Femenias Loyola, 1959). With each year the school gained more acceptance and support. During the Second World War and later, the naval air stations in the US used the television in their training programmes. In 1949, the first major study of teaching by television was made in order to ascertain, whether the students taught by the television had learned as much as the those taught by conventional methods of teaching. The study showed that in 80 per cent of the comparisons the television group was either as good or better than the conventional classroom group (Kuppuswamy, 1976).

Many later studies in the United States and elsewhere have clearly shown that television when used in the elementary schools, secondary schools, colleges, training colleges, army, air force, salesmen courses etc, has proved to be (if not more) effective as conventional classes. This has established film and television as the new technological aids to extend the formalized educational situation (Kuppuswamy, 1976). However, the phenomenon of primary and high school education through TV has its share of critics too. In fact, different studies have shown different results regarding the relevance of TV in imparting education to school children.

Many scholars have conducted experiments to measure the effectiveness of educational television programmes in different subjects for the teachers and children of various grades and discovered that after viewing the television programmes not only did the students obtain better results by studying with the help of ETV but the teachers themselves had significantly greater confidence in teaching. Greenhill (1959) observed through his experiment in Pennsylvania for a period of five years that the television instruction was quite effective, as students who had studied
Zoology by television lessons obtained good results.

Ogawa (1963) let 140 Japanese fifth grade children watch an educational television programme in the Tokyo-Yokohama instruction area. Comparison of pre-test and post-test scores showed substantial increase in the students' knowledge. Kelley's (1964) comparisons of achievement tests between television teaching and conventional teaching during the period 1956-61 in four subject-matter areas, namely, English, Mathematics, Science and Social Studies showed that students generally did well when television was used as a regular source. In fact, in one of every four comparisons significantly higher achievement scores were made by the television group.

Four years of field research drawn from El Salvador's experience with ETV showed that the students learned more with ETV than they did under the traditional system (Mayo et al, 1976). The El Salvadorian experience underscored the idea that ETV or any other instructional technology is best conceived in terms of broad system needs. ETV was not imposed over traditional structure, rather it was coordinated with other major changes in EL Salvador's educational system.

Tsuji (1964) conducted a study on supplementary TV in an isolated village of Japan. Fifth grade children in two schools received one Science and one Social Studies programme per week, each twenty minutes in length. The other two schools in the village served as control groups. At the end of the year the TV classes had moved significantly ahead of the non-TV group in all the three measures, namely, General Intelligence, Social Studies and Science.

Kornadtad and Kwa (cited in Tulodziechi, 1977) conducted a comparative study between television classes and conventionally taught classes in the Federal Republic of Germany in which objective studies for Grades IX and X were administered. They reported that in 26 out of 40 comparisons between two
comparative classes, higher achievement scores were obtained by pupils in television classes. In seven cases higher achievement scores of conventionally taught classes were observed and in seven cases there were no significant differences.

In Italy it is the Telescula (the television school, not television for school) which provides education in a variety of subjects for children and adults otherwise unable to study. The success of the alumni of the Telescuola in the public school examinations is testimony to the effectiveness of their television teaching. In 1961, 69.6 per cent of the television candidates were accepted for admission to the second year and 73.2 per cent of the television pupils passed the promotion examination as compared to 69.9 per cent of the classroom students (Schramm, 1964).

Studies done in India, too, show the utility of T.V. in school level education. In New Delhi eighth grade Geography classes were compared on a 24 day unit of study. One of the classes was shown a number of films during the experimental time, the other class was not. Tested at the end of the unit and again some weeks later, the class that had seen the films did significantly better (Schramm, 1964). Similarly, a critical study of the educational TV programmes for the primary school children was done by Mohanty (1992) in the state of Orissa. The main findings of the study on the school children have highlighted the positive influence of TV particularly in relation to the scholastic achievement on different criterion measures.

Aghi (1977) in his study in Rajasthan and Gujarat also found that TV exposure of science education programmes stimulated an interest among the experimental school children of grades III and V. They became “high” performers from “low”, performers as compared to control-group school children among whom the trend was, “low” to “medium” and “medium” to “high” performance. In this study conducted in Kheda by Space Application Center, Ahmedabad, a series of science programmes for children of 6 to 12 years were transmitted. These programmes were on nutrition,
hygiene, environmental science, nature and universe etc. Various questions were asked in order to know the impact of the ETV programmes. More children of experimental villages gave appropriate answers in response to questions relating to the principles of hygiene, simple experiments and information about surroundings as compared to the control villages. Thus, various studies have highlighted the significant role that TV has played in education of children.

Many other scholars, however, have shown the exact opposite. For example, Herminghaus (1957) pointed out that those who were taught face to face through traditional techniques scored significantly higher than TV taught children. Johnson and Harty (1960) proved that the performance of high school students who were conventionally taught was significantly better in comparison with the children taught by TV. Similarly, Woodward (1964) in his study in Miami also confirmed the above fact by reporting that the achievement of students in Biology was significantly superior in the case of face to face classroom teaching than the TV taught students.

Johnson (1960) also reported that students who were taught introductory Geography by conventional instruction had significantly better achievement than students taught by television. Similarly, Abe (1963) compared two groups of Japanese students randomly assigned either to a TV programme and a lecture by the same professor. The programme was about elementary science concerning mind. He observed that the lecture group did significantly better than the TV group. Thus, if some studies have pointed out the usefulness of TV in education, others have demonstrated the continuing importance of the traditional method of classroom teaching. There are still others who consider both as being equally relevant. For instance, Gordon (1965) in his experiment of language teaching through television has shown very little difference between television teaching and face to face teaching by the regular teachers. The students of a Hawaiian school who had pronunciation problems were taught remedial speech by either television or their own regular
Daniels (1959) observed four groups of secondary school pupils who studied science topics by different methods. Out of four groups involved, one viewed a television lesson, one heard only a sound track of the broadcast and the third had a conventional science lesson. The fourth group received no instruction. It was revealed from the findings that some teaching was better than no teaching at all but there were no significant differences to indicate that any of the three methods was superior.

Shukla and Kumar (1977) pointed out from their research on teachers in New Delhi that the most significant finding noticed in the teacher behaviour regarding education through TV, was that the teachers were full of praise for television. A very large majority felt that TV has been helpful in improving the knowledge of the children. They did not consider it as waste of time or obstructive to teaching, nor did they face any disciplinary problems because of it. However, they were ambivalent on the issue whether TV can teach better than teacher.

Thus, most studies barring a few have highlight the role that mass media can, and do play in adult as well as primary and high school education. As a report of the National Workshop of Educational Broadcasting (UNESCO, 1980) points out, the broadcasting and telecasting media for a long time to come will be the only instruments of education, information and cultural development. Instruction through media will be the latest trend and technique in the field of education. And of these television in particular is one medium of communication that demands a major share in educational endeavours towards enhancement and enrichment.
Utilisation of ETV at College and University Level

As was the case with the primary, secondary and adult education, in the case of college and university, too, different scholars have tried to gauge the effectiveness of ETV in education. However, as the following studies will indicate, the notable thing about these researches has been that unlike the primary, secondary and adult education, where definite positive or negative results were seen, in the case of college and university, no clear relationship has emerged in most studies.

For instance, Pennsylvania State University, (Greenhill, 1959) with support from the funds for the advancement of education studied the effectiveness of courses taught for a full semester over closed circuit television from 1954-1957. The results of their research may be used either to extol or damn television. Essentially, they indicate that there is hardly any loss or gain in students' learning in courses taught by television when compared to the courses taught conventionally. Students learned the information needed to pass the examination and most did not object strongly to the televised classes although they preferred live instruction.

A second major project in close-circuit instruction was at the Miami University (Macomber and Siegel, cited in Rossi and Biddle, 1962). In this experiment the primary measure of achievement was the final examination in each course, and the television classes were found to be as effective as conventional classes on this criterion. In fact, in Human Biology the television students scored higher than the conventional classes, although there were other factors that might have contributed to this difference. Similarly, contradictory results have been reported by McKeachie (1962) who found that students in Miami disliked large lectures more than television lessons while New York University students preferred conventional classes. Moreover, they also found that attitudes towards ETV classes undergo changes in different semesters.
Another well-known research project was undertaken in Chicago by Erickson and Chausow (1960). Their findings were that different results were seen in the case of different subjects and different semesters. In the first year of research, nine courses were compared: three in English, two in Social Sciences, two in Biology, one in Political Science and one in Mathematics. Significant differences in achievement between home and classroom students were found only in the Biology course, the home television students doing significantly better in both semesters. In the second year home and campus students were compared in courses in eight subject matter areas: English, Humanities, Biology, Physical Sciences, Accounting, Social Science, Psychology and Shorthand. No significant differences were found in most comparisons, but the comparisons of Humanities, Biology, and Physical Sciences favoured the home television students.

In the third year, the home television students were compared with the regular day time campus classes, with evening classes and with day classes that were taught largely by television. In three comparisons with campus classes two were insignificantly different (Social Science and Physical Science), and home television students were superior in the third (Speech). In three comparisons with evening classes home students were superior in all three subjects (Psychology, Mathematics and Speech). In the four comparisons with day-time television classes, the home students were superior in one (Social Science) and there was no difference in other three (Physical Science, Psychology and Speech). Thus, the Chicago educators felt that they had relatively strong evidence that their home television students were learning at least as much as their students in the campus class rooms. However, they were in no way superior to the latter group.

Later, the Chicago educators experimented with combining television in the classroom and came up with combinations usually including two periods of television and one period of direct instruction, which the students liked better, and in which
they did better than in classes taught solely by a class-room teacher. However, here the great importance of student motivation and of the attitude of the class room teacher who conducts the direct instruction of a part of the course were emphasized in reporting the experiments.

A major finding of most studies has been that although class room teachers are by no means completely in favour of using television in the class room yet they, nor others have any arguments against using it as an extension tool. Similarly, most students who do all their work by home television college recommend it to their friends and say they plan to take more courses. However, students who take television courses in the class room like them less and are generally undecided about suggesting them to their friends. Moreover, the group of students who have had fifteen hours or more of television teaching includes a high proportion of those who are unable to go to the campus and are, therefore, coming to television voluntarily and gratefully. It may also very well be, that the mere fact of experience with television classes encourages students to learn to do better in them and consequently to like them more.

The truth of the matter is that in most developing societies, Cable TV network has not been exploited much for educational purposes. That is why its main objectives have so far remained confined to entertaining people and presenting information on current affairs. Some efforts are, however, being made in some developing countries to tap its potential for formal education. For instance, realizing the potential of CATV for teaching distance learners in India, an experiment was conducted involving about 960 students, 20 academic counsellors and 3000 odd general public of Modasa, a town under Himatnagar Taluka in Sabrkanth district - located about 120 Kms north of Ahmedabad (Chaudhry, 1994). It has a population of more than forty two thousand and is the second largest Indira Gandhi National Open University (IGNOU) study centre in Gujarat region, located in the local college.
campus. A substantial number of students (about 960) are enrolled for the certificate programme in Food and Nutrition (CFN). An absolute majority of students are housewives. CATV network was conducted jointly by the development and education communication unit of Indian Research Organization (ISRO) and the IGNOU. The CATV network was used in an interactive mode with two-way audio and one way video communication. While a number of national and regional level educational experiments have been conducted using satellite based interactive network, the Modasa experiment is the first in the country conducted on a cable TV network.

It is pertinent to mention here that the cable network operating in Modasa covering about three thousand households was already transmitting educational programmes produced by IGNOU for its students. It was, therefore, considered most appropriate to conduct an experiment by augmenting the existing cable network, to provide a teaching room from where distance teaching (more specifically academic counselling) was conducted by the local academic counsellors engaged by IGNOU for the CFN students. The students spread over the network could ask questions and discuss their problems through an audio system. The Modasa cable T.V. experiment was conducted in April, 1993 to examine the feasibility and pedagogical effectiveness of an existing cable network. Here again mixed results were seen as different views on the usefulness of media, especially T.V., in education were found as some said it was useless, some considered it useful while, some said it is useful only along with a teacher.

Thus, summing up we can say that the media can be and are being used to help meet a variety of educational needs, in and out of school. Specifically, they are being used in a different places to upgrade class-room instruction, to teach teachers, to extend the school, to support the spread of literacy and fundamental education and to offer adult education and community development information. They are
being used in all regions of the world and in all parts of countries and cultures under certain circumstances relating especially to culture, location and level of development. It may or may not be relatively easier to use education media effectively, or to use one type of medium rather than another. But there would appear to be few situations where the application of one or another of the new media is not worth serious exploration and to rule out this possibility arbitrarily without careful appraisal, is to cut off blindly a potential avenue to national advancement.

**Educational Television in Iran**

The development of television in Iran follows the pattern of development and utilization of TV in some of the advanced countries of the world. Iran has a long involvement with educational broadcasting going back to the late 1950s. Television programmes for schools and general audiences were first broadcast at this time by the privately owned television stations. But not long afterwards the Ministry of Education established its own education television and transmitter in Tehran. After some initial interest stimulated by the gift of free receivers to a number of schools, enthusiasm died away and very few teachers could be found who regularly used TV programmes. The programme schedule depended heavily on films imported from the United Kingdom, France and the United States of America which had only marginal relevance to the Iranian school system and its curriculum.

Meanwhile, a state corporation took over television broadcasting and began some fairly successful adult education programmes in subjects like agriculture and foreign languages (NIRT, 1974). In the sixties, Iran used educational television successfully to transmit a six week summer make up (re-appear) course in Physics to students who had failed the course during the school term. Seventy-two per cent of the students who took the summer course made passing grades when they took the course examination once again in the autumn (Schramm, 1964).
In 1970, the National Iranian Radio and Television Organization (NIRTO) took over the responsibility for school broadcasts and hired a firm of American management consultants to design a comprehensive national ETV system. A small army of university graduates was despatched to the United States to acquire higher degrees in educational technology, in order to run it. In 1974 Educational Radio and Television of Iran used an educational machine called the Eighty (80) System. It had audio-video tapes and sound recorders and five response keys. Receiver or student could take an educational message from the 80 System and could push one of the keys and respond to the question. If his/her response was wrong, the message was repeated and if receiver's (student) response was right, a new message was given. At present time the 80 System are used for teaching Persian of first class of primary school and it has been found very effective in the teaching of students (Eraut, 1989).

After the Islamic Revolution of Iran in 1979 educational broadcasting continued in TV Network Two which produced educational programmes for adult literacy, high schools and Payam-e-Noor (Message of Light) University especially during the summer course. The broadcasting of the literacy programme of Iran was an important measure that was taken along with implementation of the literacy mobilization programme as a facility for the illiterate population. This programme was provided cooperation and coordination by the Literacy Movement Organization (LMO) and Islamic Republic of Iran Broadcasting (IRIB). It was devised for those illiterates who can not participate in literacy classes. This programme consisting of Arithmetic and Persian classes was broadcast twice a day during the summer and winter of the mobilization literacy year 1990. Each teaching period took 20 minutes. The whole programme included 200 teaching periods. It is worth mentioning that the programme was so popular that it is now being re-broadcast by IRIB twice a day in the morning and the evening.
Since March 1, 1994 a broadcast of one hour radio programme for new literates called "Knowledge" is being done daily from Network 2 Radio. According to Literacy Movement Organization (LMO, 1994) between 1979, the year of the establishment of the Literacy Movement Organization, till the end of the 1992-93 academic session, eight million people have successfully completed the elementary and complementary course (LMO, 1994a; 1994b). LMO has four courses, namely Preliminary Course during which the learners become familiar with elementary reading and writing and simple calculation and which takes 240 hours; Complementary Course whose completion is equivalent to the grade three of formal system of education which takes 320 hours; Final Course which is a more advanced level of literacy for the learners who could successfully pass the two previous courses and on whose completion after 516 hours new literates receive a certificate equivalent to the fourth grade of formal schooling; and Fifth Grade Course for which one can enrol in fifth grade of primary education after passing the final literacy course. This stage takes 800 hours. Learners who complete this period can get linked to the formal system of education, even into the university.

During the years 1984 - 1992 about 6,453,467 of learners could pass different levels of preliminary, complementary, final and fifth grade of literacy programmes. The total literacy rate of 48% in 1976 increased to 62% in 1986 and 75% in 1991. In the year 1994 only 25% of the population were illiterate. With regard to the reduction in the illiteracy rate, the number of illiterates came down from 14 million in 1960s to 11.5 million in 1991 and an estimated 9.9 million by end of 1994. In more recent times, the deputy of the LMO has been quoted in the February 2, 1997 Iran News Paper as reporting that the number of illiterates in Iran has come down to 9 million in 1996. Literacy Movement Organization statistics also show that from 1991-1996, a total of 9,785,864 persons have been covered by different ETV literacy courses (preliminary, complementary, final, fifth grade). Of these 76.5% are female and 23.5% are male (Table No. I.1).
### Table No. 1.1

Statistics of Covered Illiterates on the Basis of Sex During 1991-1996

<table>
<thead>
<tr>
<th>Year</th>
<th>Female Number</th>
<th>Female Per cent</th>
<th>Male Number</th>
<th>Male Per cent</th>
<th>Total of literate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1,604,339</td>
<td>74</td>
<td>5,621,36</td>
<td>26</td>
<td>2,166,475</td>
</tr>
<tr>
<td>1992</td>
<td>1,405,360</td>
<td>74.3</td>
<td>4,864,78</td>
<td>25.7</td>
<td>1,891,838</td>
</tr>
<tr>
<td>1993</td>
<td>1,340,462</td>
<td>75.4</td>
<td>4,373,93</td>
<td>24.6</td>
<td>1,777,855</td>
</tr>
<tr>
<td>1994</td>
<td>1,117,494</td>
<td>77.8</td>
<td>3,188,88</td>
<td>22.2</td>
<td>1,436,389</td>
</tr>
<tr>
<td>1995</td>
<td>1,050,713</td>
<td>80.1</td>
<td>2,618,18</td>
<td>19.9</td>
<td>1,312,531</td>
</tr>
<tr>
<td>1996</td>
<td>9,680,18</td>
<td>80.6</td>
<td>2,327,65</td>
<td>19.4</td>
<td>1,200,783</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7,486,386</td>
<td>76.5</td>
<td>2,299,478</td>
<td>23.5</td>
<td>9,785,864</td>
</tr>
</tbody>
</table>

In October, 1996 the office of technology related to organizing of research and planning of Ministry of Education formulated an educational plan and named it "Education Through Picture". In 15 provinces of the country they chose 120 primary and guidance schools including two sectors in every province. The first sector included one primary and one guidance school for girls and the second had one primary and one guidance school for boys.

In primary school the students were taught Mathematics from first to fifth classes by television programmes and in the guidance schools students have been taught defense related courses and Mathematics in first, second and third classes by TV programmes. Also in all the 15 provinces 250 high schools have been chosen including 26 girls and boys high schools in each province. In the high schools the students have been taught Biology, Physics, Defense Studies, Chemistry and English language. The plan has proved successful since the time of its inception in 1996-1997. So, the planners have decided to continue the plan for 280 primary, 170 guidance and 1000 high schools in 1997-1998 study year as well.
Utilization of TV in Distance University of Iran

Payam-e-Noor (Message of Light) University (PNU) was established in 1987 as the unique distance teaching system in the country. It is a state institution and the degrees it awards are all recognized and have the same status as those of other state universities. In 1994, the university enrolled about 100,000 students in various degree programmes. PNU has 117 active local centres scattered throughout the country. The nature and scale of its operation makes PNU the most flexible and cost-effective institution under the Ministry of Culture and Higher Education. It is also the largest state university in terms of student number and coverage (PNU, 1995).

PNU has already generated three groups of graduates, some 4,356 students in four study programmes including Education, Persian literature, Mathematics and Chemistry. Courses are mainly based on self-study texts, which are developed for the purpose of individual instruction. The texts are normally divided into separate units. There is usually a self-assessment section at the end of each unit which helps students correct their errors and motivates them to pursue their studies. At regular intervals, assignments are given to students. There are also supervised mid-term and final exams. The scores obtained from these tests determine the final course grade. The minimum passing score is 10 (50%). Almost all courses hold a limited number of class meetings during each semester. Generally speaking each course carries 1-4 credit units and the number of the face to face classes ranges from 3 to 8 throughout a semester. Some self-study texts are supplemented with video and audio tapes. For a few science based courses, laboratory activities, practicals or field-work trips are also arranged.

PNU coordinates with Network Two television of Iran to prepare educational programmes. It is worth mentioning that at the time of our data collection (1995)
about 70 hours educational video tape had been prepared and there were 820 hours of video tapes in Persian and English languages in PNU filing providing 1300 hours of education to students.

Thus, as we have seen, TV has been used for educational purposes for almost four decades in Iran. However, there are only a couple of studies dealing with this phenomenon and these, too, are confined to evaluating the effectiveness of TV in teaching young children. For instance, comparison of education through television with guide and teacher to handicapped children was the topic of an M.S. thesis in communication sciences research in mass media branch in the mid seventies (Norozi, 1979). In this study two groups of handicapped children each consisting of 5 students were chosen as sample. One group was taught by TV (Video Tapes) and the other was taught by teacher. Their test results showed that there is no significant difference between the two methods (teaching by TV and teacher).

A research was also done in 1979 in Iran on the type of influence television teaching methods have on learning Mathematics in comparison with the lecture method for children. In this research 120 male and female students of Tehran high schools were chosen as a sample from four or five high schools. These were then divided in four groups of thirty (30) students each. They were taught Mathematics by two methods, the first by conventional and the second by television classes. The result of the experiment showed that there are significant differences between the students who learned by lecture and who learned by T.V. It was found that the students who studied by T.V. got higher grades than those who studied from a teacher (lecture) (Hovida, 1979).

Thus, the number of studies focussing on ETV's role in education is very small and even these concentrate on primary school students. Moreover, they offer contradictory findings. It is, thus, important that the role of ETV in higher education is also studied and our study is a step in that direction.
Objectives

Keeping in mind the preceding discussion, the following are the basic objectives of the present study:

1. To appraise the demographic and socio-economic profile of the students and teachers in a select university of Iran,

2. To study and analyse the attitudes and perceptions of university students and teachers, towards education by T.V.,

3. To examine the effectiveness of T.V. education programmes among the students in a select university of Iran, and

4. To compare the performance of students of different subjects who have been taught through T.V. with that of the students who have received only classroom education.

Methodology

This study is based on both library research and field research. In the case of library research we have used different resource libraries and research centers in Iran and India. The field research was carried in a select university of Iran in two parts:

a) Preparation and Administering of a questionnaire, and

b) Experimental method.

The select university was Islamic Azzad University of Iran. One of its branches is in Malayear, Malayear being one of the western cities of Iran in Hamedan province. The 416 students of the Malayear University during the summer semester studying...
four subjects, namely, Geography, Mathematics, English language and Geology formed the universe of the study. Through systematic random sampling method 208 (50%) of these were selected for the study. The same method was used to select the 50 teachers out of approximately 107 teachers teaching at that time.

In order to understand their economic, social and biographical background, as well as, examine their views and perceptions towards education through T.V., a questionnaire was designed and administered to the university students and teachers. The questionnaire was by and large common for university students and teachers but some questions related particularly to students, while others only to teachers. To evaluate the validity of the questionnaire a pre-testing was done as 30 questionnaires were distributed among the B.S. students to fill. Some of the questions that were necessary and had been missed were added and some of the unnecessary questions were deleted.

The questionnaires were distributed to the students in two ways, either directly by the researcher or they were given to the teachers who got them filled by the students and returned them to the researcher. Among students, approximately 75% of the questionnaires were filled and returned while among teachers approximately 68% questionnaires were filled and returned. Thus, the total number of respondents came to 157 students and 34 teachers. A general description of the respondents and a discussion on their perceptions regarding ETV is given in Chapters III and IV, respectively.

As mentioned earlier, the experimental method was also used in this study. Since the Mathematics students belonging to the Management faculty had finished their courses and left by the time the experimental test took place, they did not take part in it. Thus, we deleted the number of Mathematics students, namely 60, from the total number of students, i.e. 416 and the total number of students in the subjects...
of Geography, Geology and English language in the university came to 356. Of these we again selected a sample of 208 through the systematic random sampling procedure. Of the 208 students the subject wise break-up of respondents was as follows: 88 in Geography, 60 in Geology and 60 in English language. For the experiment we decided to select 50% from each subject (44 for Geography, 30 for Geology and 30 for English language) by proportionate stratified sampling. Each of these subject groups was further divided into two groups by systematic random sampling which were our experimental and control groups, respectively. All were then given tests in two stages in order to evaluate the relevance of TV education programmes in affecting scholastic achievement. The details of the experiment and its results are discussed in Chapter Five.

In the preceding discourse we have focussed on the phenomenon of development discussing its connotations, as well as, the factors necessary for development one of which is human resource development. The latter involves the role of education in training of experts and skilled manpower. We have also emphasized the role of media, especially TV, in the advancement of education at different levels. In the next chapter we shall provide a general description of Iran concentrating on development in Iran and on education as one of the important factors in its development.