

# A STUDY OF EFFECTIVENESS OF EDUSAT PROGRAMME IN COLLEGES OF FARIDABAD

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**Abstract :** This study was designed to see the effectiveness of Edusat Programme in colleges of Faridabad the sample of the present study comprised of 200 students from 100 ROT (receive only terminal) colleges of Faridabad 50-50 from two colleges. Similarly, 100 NON ROT colleges 50-50 from two colleges. The sample has been selected through incidental and purposive sampling techniques. All the information collected by using a questionnaire was developed with the concentration of NCERT, NUEPA, IGNOU and guide. In this academic achievement tool, total 30 items are there. Each item is having four options where one answer is right and others wrong. The interview technique was also used for collecting reactions of the expert group. The items of interview schedule were prepared in structured and open ended forms, keeping in mind that it carried the same meaning and import for the study as collection of data via questionnaire technique. Thus both the techniques of questionnaire and interview were used for collecting the desired information. Results confirmed the hypothesis of not significant different of effectiveness of Edusat Network on academic achievement of the student.

## INTRODUCTION

" Education Technology - basically means all the intellectual and operational efforts made during recent years to regroup, arrange and systematize the application of scientific method to the organization of new sets of equipment and material so as to optimise learning processes." - UNESCO

Education is found to be the most powerful tool for social transform. The nation will be on a way of all round development when there adequate educational enhancement. Our country is passing through a crucial stage in respect of educational progress for which we not able to reach our ultimate goal. India is a multilingual and multicultural country with large geographical barriers, many are even inaccessible lack of infrastructure at rural areas and insufficient quality teachers are the greater hurdles which adversely affect the efforts made in education.

Now a days, we are going through a period of rapid transition. These changes are taking place in our society faster than are could think of a couple of decades ago in technology, values, economy, politics and policies on a number of fronts. Therefore, it is the responsibility of education to help the children to adjust themselves in these changing situations. For this child is subjected to certain experiences that one intended to modify its behavior for proper adjustment to changing environment. To overcome the challenging situations in today's classroom the teaching has to play a significant role.

India is a developing country as we have limited resources. Due to this cause, it is not possible in India to provide quality education to each student. But India is unique in this, respect and the capability of the satellite is being used for providing consistent opportunities of education to all so that anyone at any this natural mission which can be done though edusat program. Edusat project has ample scope for interaction. This project will play an important role in higher education sector in India.

Dr. Kalam envisages a strategy of how education satellites like edusat can help providing education for all. The recent launch of edusat makes it possible to provide quality distance education program to the many parts of the country.

Edusat is known by education through satellite that was launched by ISRO (Indian space research organization) on September 2004. It is the first Indian communication satellite built exclusively to serve the educational sector. It is mainly intended to meet the demand for an interactive satellite based distance education system for the country. Tremendous expansion has taken place in the field of higher education both in quality and quantity during this period quality education to all is the priority of the higher education department. some of the major projects started by the department, edusat is one of them. The project has been implement in government colleges of the state in the first phase. An amount of Rs. 2.00 crore on plan side would be utilized for this project. During 2008-2009 government has decided to connect private aided colleges through the edusat network and also decided to provide edusat equipment free of cost in all government aided colleges.

We have observed that late 20th century advancement in computer technology have revolutionized many aspects of life. Perhaps even more significant, computer technologies have transformed social system. Which influence the delivery of goods and services that are at the core of society's well being. Medical diagnosis and prescriptions can now be accessed without ever seeing a doctor. Legal and financial advices are obtainable through virtual advisors.

## EDUCATION TECHNOLOGY

Educationists now -a- days realize that in education 'learning' is more important than 'teaching'. Learning is concerned with pupils where as teaching is concerned with pupils and teacher. In the older days, teacher was the only source of knowledge. The students learned what the teacher taught. With the advent of text books and other learning aids, the teacher's personal knowledge though important, ceased to be the only or even the paramount source of learning. Hence the textbook author, the radio programmer, the film-producer and many others now assist in the learning process.

Educational technology consisting of various media of mass communication, suitable child learning process and modern testing and evaluation techniques are essentially required. Especially in developing countries like India, it has to be mastered and utilized by educationists, if they are to keep pace with each other and catch up developed improvement of education can be facilitated and accelerated with the help of educational technology.

## EDUCATION IN HARYANA

Haryana is a very small state of northern India, but having a significant role to play in the social, cultural and economical aspects in the country. Haryana with its strong infrastructure of power, water and transport provides great attraction to industrial enterprises. It has shown a great economical and industrial growth. Especially, Gurgaon, Faridabad and Panipat Districts emerge as industrial cities on the world map. Education is concerned Haryana has a good network of educational institutions. In Haryana primary schools are available within a radius of one kilometer, Middle school level facilities are available within 1.87 kilometers, high schools are available within a radius of 2.1 kilometers and senior secondary schools are available within a radius of 3.8 kilometers. This figure indicates that the educational sector in Haryana have sufficient infrastructure facilities.

## EDUSAT SATELLITE

Edusat or GSAT-3 was launched in September 2004 by the Indian Space Research Organization. Edusat is the first Indian Satellite built exclusively to serve the education sector. It is mainly intended to meet the demand for an interactive satellite-based distance education system for the country. Edusat carries five Ku band transponders providing spot beams, one Ku band transponder providing a national beam and extended C band transponders providing national coverage beam.

For proper management of the EDUSAT Programme and content development Government of Haryana established an independent society named UTKARSH (use of technology for knowledge advancement and reorientation of studies in Haryana) registered under the Societies Registration Act 1860, on 17th of November 2005. This society works under the chairman ship of finance commissioner Haryana. One senior HCS works as member secretary and one HCS from technical education department act as joint director technical in this society.

## HIGHER EDUCATION PROGRAMME IN HARYANA THROUGH EDUSAT

The department of education, the govt. of haryana has constituted a society called utkarsh under the societies registration act 1860 for the purpose of making use of the edusat for various development social, educational, health, literacy, cultural, research programmes. now

Education through satellite (EDUSAT) project has been implemented in all the government colleges of the state in the first phase. A separate studio for higher education has been constructed in DIET building, sector-2, Panchkula. The EDUSAT equipments have been installed in the studio/colleges by the ISRO through Bharat Electronics Ltd. Bangalore. An amount of rs. 2.29 crore on the plan side would be utilized for this project as well as Rajiv Gandhi Education city in the year 2007-2008. The imparting of education through EDUSAT has already begun from 24th July, 2006. During 2007-08, Govt. has decided to connect Private aided colleges through the EDUSAT network. For installation of EDUSAT equipment in private aided colleges, the Govt. will provide Rs. one lakh as subsidy. Imparting of training in soft skills that started in 2005-2006 has been given a new dimension with the telecast of DVD's pertaining to soft skills of 128 hours through EDUSAT for all the Govt. colleges in Haryana. The Govt. has started various job oriented courses in some of the Govt. colleges. The list of courses is as follows:-

1. Bachelor of Tourism Management (BTM)
2. Bachelor of Information Management (BIM)
3. Bachelor in Mass Communication and Video Production (BMC&VP)
4. Bachelor of Business administration (BBA)
5. Bachelor of computer Application (BCA)
6. Bachelor of mass communication (BMC)
7. Post Graduate Diploma in computer application (PGDCA)
8. Bachelor of Mass communication and Journalism (BMCJ)
9. Computer Science
10. Industrial Microbiology
11. Bachelor Degree in Lib. And Information Science
12. Fashion Designing
13. Early Child Care and Education
14. Bio Technology

All the 94 govt. aided colleges functioning in haryana will be connected through edusat network during the current academic season. After connecting the govt. aided colleges of state through, edusat the interactive lecturers for B.A., B.Sc. and B.Com students would be given. A common time table for all the colleges would be formulated and the difficult subject should be taught in easy manner.

## STATEMENT OF THE PROBLEM

### "A STUDY OF EFFECTIVENESS OF EDUSAT PROGRAMME IN COLLEGES OF FARIDABAD"

#### Operational Definitions Of The Key Terms Used:

- **EDUSAT:** It is the first Indian Satellite built exclusively for serving the educational sector and was launched successfully by GSLV-FOI on 20-9-2004. EDUSAT is education through satellite.
- **College :** College includes the classes of after 12th.
- **Effectiveness :** Effectiveness is a measure of the ability of a program, project or task to produce a specific desired effect or result that can be qualitatively measured.

## OBJECTIVES OF THE STUDY

The main objectives of the study are following:

- To study of organizational structure of EDUSAT in Haryana.
- To find out the quality of the e-content telecasted on the EDUSAT network.
- To study the effectiveness of EDUSAT network on the academic achievement of students studying in college.
- To suggest measures, for further implement of EDUSAT supported network quality college education.

## HYPOTHESES

- There will be no significant different of effectiveness of EDUSAT network on academic achievement of the student.

## REVIEW OF THE REALATED LITERATURE

The need for review of literature has been recognized by all the researchers. The search of literature before and after the selection of the problem develops deep understanding of the subject in which a research scholar intends to investigate and explore new areas. Recorded knowledge of the past reveals the problem and also develops understanding of various techniques available for such a study. By going through the previous studies, investigator comes to know that similar study has not been conducted before. It also develops the idea that contributes to the overall rational and interpretation of data. These purposes can only be accomplished by a systematic and through study of the available literature.

“The orientation provided by survey of related literature is helpful in making a straight forward statement of need for investigation and of avoiding two extremes of apologetic attitudes and exaggerated claims.”

- C.V.Good

According to Good, barr and scates, survey of literature serves the purposes:-

- To show whether the evidence already available solve the problems adequately without further investigation and thus to avoid the risk of duplication.
- To provide ideal, theories, explanation or hypothesis valuable in formulating the problem.
- To suggest methods of research appropriate to the problem.
- To locate comparative data useful in interpretation of results. And
- To contribute to the general scholarship of the investigator.

## INTERNATIONAL EXPEIMENT IN SATELLITE TECHNOLOGY INITIATIVES IN EDUCATION

### Australia

#### Satellite Television and Distance Education (August 1985):

In August 1985, Australia steps forward in the field of education through satellite by launching AUSSAT from United States into a geostationary orbit 36,000 Km above the north of Australia. Educationally this network is impressive, as evidenced by the list of project:

(A). “School of the Air”: Class-6 of Mt. Isa is linked through a voice and data satellite network with a regular television programme transmitted from the Brisbane.

(B). Remote control videos: Teachers at the thirty-five sites throughout the state will be able to access the film and video library of the department of education.

(C). Teacher's development telecast: Teachers in remote area who initially have access a regular teacher development loaned video cassettes series, now be able to view the series via transmissions.

(D). Post-secondary education: A number of the state's universities and post secondary colleges have ambitious plans to take post-secondary education to the outback by means of direct satellite telecast, voice teleconferencing, computer link ups and the AREGON audio graphic teaching systems which enables teachers to use a light pen to draw on a television system.

## South Africa

### University of Pretoria's "Tele Tukes" (Hodge & Miller, 1997)

This is also an initiative aimed to at transforming the country into a "knowledge-based society" through the use of ICTs. This project was specially undertaken to improve the performance of pupils in the subjects of Mathematics and physical science. Although South Africa's information communication technology (ICT) industry and use of ICT in the economy is considerably better than that rest of Africa, but there is inequality in telecommunication access (Hodge & Miller, 1997).

Access to internet is mostly in major cities, sidelining 70% of people in the rural area. Only 48.3% of black households have TV sets, compared to 95.5% of white households (SAITIS 2000:22). Based on the outcomes of the third international mathematics and science study (TIMSS) in 1994 and the school register of needs survey in 2001, it was decided by the government of South Africa to establish "Tele- Tukes network" for schools and to use this network in the rural schools of the northern (Limpopo) province. The telematic learning school programme (Tele-Tukes) of the University of Pretoria is a community based project that provides a free educational satellite TV service to secondary schools. The TV broadcasts, supported by internet and telephone feedback links throughout the country, are aimed to supplement the teacher's lessons and not to replace teachers. The programmers' assist schools in problem area of subjects such as mathematics, physical science, Biology, Accounting, English, Geography and carrier Guidance. Specialists Nin there subjects who are experts at teaching their subject content, present these programmes. Through this ICT- learning methodology, a wider base of learners can be reached than through the one-teacher one-classroom approach.

### Satellite Symposium by American Pharmacists Association's (2009):

American pharmacists Association's in 2009 conducted their Annual Meeting & Exposition, through satellite, where more than 7,000 pharmacists and pharmacy professionals from every practice setting gather for 4 days of professional education, career enhancement and networking in San Antonio, Texas, April 3-6, 2009. The Benefits of conducting a satellite symposium is to access more than 7,000 pharmacists; pharmaceutical scientists; student pharmacists; pharmacy technicians; and others interested in advancing the profession.

### JISC two-way satellite internet access trial:

The joint information systems committee (JISC) is a national body, which provides ICT services and carries out development activity for the higher and further education sectors in the UK. It funds the JANET Academic network, which is a private network that connects all the universities and further education colleges in the UK to each other and the wider internet. JANET is managed by UKERNA on behalf of the JISC community. In 2001 JISC set up the JISC satellite working group (JSWG) to investigate the potential of satellite telecommunications technology to enhance JISC services, particularly in two areas, broadband access with special focus on institutions and individuals located in remote areas and multimedia content delivery in the year 2004.

The pilot under evaluation in this report concerns the first area of application: broadband access with special focus on institutions and individuals located in remote areas where access to terrestrial broadband services is problematic. There is little doubt that satellite technology has the potential of ubiquitous connectivity to the internet and that it may offer a solution to the delivery of broadband connectivity in the "last mile" to places of learning, especially where existing terrestrial broadband access technologies such as DSL and cable are unlikely to become available in the short to mid-term. This is linked to an increasingly widely accepted belief that although terrestrial services play a central role in the UK's broadband infrastructure, it will not be economically viable to deploy them universally throughout the UK.

With this in mind a two-way satellite internet access Trial, was organized, funded and coordinated by JISC and managed by UKERNA. For that purpose, 17 off-campus learning centers or sites and individuals (staff), all located in remote and currently underserved areas, were equipped with small two-way satellite telecommunication systems and services. The aim was to assess the feasibility of broadband satellite telecommunications as a solution for internet access.

Two satellite service retailers, representing three major satellite telecommunications technology and service providers (SES Astra, Gilat, Hughes network systems ) and making use of four different two-way satellite systems (Astra BBI, Gilat 180, Gilat 360E, Hughes DW DW5000), were involved in this trial. The satellite connections all used very small Aperture terminal (VSAT) technology. For two-way connectivity. The user group was divided into two general application areas: the first group consisted of off-campus learning centers, small user groups and individual users (1-4 PCs per site) the other group consisted of larger sites (~10 PCs per site) requiring broadband connectivity.

The planning of the pilot started early 2002 and the pilot itself began in November 2002. Two satellite service retailers were selected to deliver a 12- month two-way broadband satellite service, including service support for the 17 sites.

Technical feasibility of the two-way satellite technology to provide access to the internet is successfully proven. Up to date hardware and services are available and able to connect rural and even the remotest sites in the UK to the internet and than onto JANET. There are some outstanding issues specifically related to access to the JANET network especially for products at the lower end of the range, but it is evident that these problems can be solved in deployments that are more permanent and larger scale and where the additional cost for a direct connection to the JANET is justifiable. In brief the benefits and limitations as they were confirmed during the trials were as follows:

#### Benefits and limitations of JANET Trials

Benefits	Limitations
Fast and easy to deploy, providing an immediate access infrastructure	DBS (Digital broadcast satellite ) services (which use the DBS downlink spectrum) cannot provide a satellite return link
Wide coverage: one satellite can provide access over a whole country or several countries at once	Latency problems for GEO satellite (traffic takes more than half a second to make a round trip)
Not limited to linear roll-out	Data transmission is highly asymmetrical.

### INDIAN EXPERIENCE IN SATELLITE TECHNOLOGY IN EDUCATION

**Joshi, V. 1987.**

**A study of the effectiveness of school television programmes in science at the secondary school level.** *Ph.D, Edu. The maharaja sayajirao Univ.of Baroda.*

#### Objectives:

- (1) To study the STV Programmes in science in terms of Instructional objectives number of programmes, content coverage, its suitability and resources required.
- (2) To study the impact of STV programmes on the scholastic achievement and scientific attitude of students.
- (3) To study the effect of intervention activities on the achievement and attitudes of students.

#### Major findings:

- (1) The STV Programmes had not changed over the years, and the coverage of different science subjects was inappropriate although 40% of the total course was covered.
- (2) The time given for preparation of STV programmes was insufficient.
- (3) The quality of STV programmes was poor although the timing and duration were appropriate.
- (4) No significant difference was found in the scientific attitude of students exposed and students not exposed to STV programmes in the three groups.
- (5) No significant difference was found in the scholastic achievement of students in the three groups. (MSY 0925).

**Dasari, Rajendra Prasad, 1989.**

**Learning experiences and their effectiveness in teaching: an aspect of educational technology.** *Indian Educational Review, Vol.24 (2): 124-130*

**Objective:** To study the hierarchy and interdependence of learning experiences and their application in making the teaching – learning process effective and increasing concreteness and abstractness.

#### Major findings:

- (1) The higher the concreteness of a learning experience provided to students, the higher was the perception level in them organization of different learning experiences at the right time and right place provided better understanding of the subject-matter than any single experience.
- (2) Exhibition of real objects provided experiences of higher order than contrived experiences. Higher order experiences always embraced the lower order experiences.
- (3) The principle of “unity of experiences” or “wholeness of experiences” must be clearly understood by the teacher to make the teaching-learning process more effective by coordinating the different learning situations of the subject-matter.
- (4) It was seen that no amount of demonstration or lecturing can take the place of individual experiences with reality.
- (5) No acquired experience is absolute it is a function of time and space.
- (6) A classification of learning experiences can be pictorial model where each learning experience is stated as a permeable ball, one enclosed in the other.
- (7) Objective experiences, model experiences and language experiences increased the concreteness and abstractness.(KCN 1436)

**Pillay, Subramanian G. and Anander. K. 1990.**

**An analysis of the educational Video productions made in India.** *Independent study. Madurai kamaraj Univ.*

#### Objectives:

- (1) To find out the distribution of educational videos produced by different centres and different years.
- (2) To analyses the content of the educational video produced in different subjects.
- (3) To make suitable suggestions for improvement.

**Major findings:**

- (1) The total number of educational video productions in India in 1983 was just 17. The number increased to 285 in 1987.
- (2) Among the EMRC's 'the Poona centre produced the highest percentage.(42.57%)of educational video during the period 1983-1988.
- (3) Among the EMRC's' the Calcutta centre has produced the highest percentage (35.36) of educational video cassettes during the period 1983-1988.
- (4) Out of the 1,007 videos produced, more than half of them were for time duration of less than 20 minutes, while 84 productions were very small and were of less than 10 minutes.
- (5) Among the agricultural video productions were very small and were of less than 10 minutes
- (6) Among the agricultural video productions the latest technology used for increasing productivity received more attention.

**Giri, A.P. 1990**

**A study of the problems and prospects of the school broadcast programme. Ph.D., Edu. Utkal Univ.**

**Objectives:**

- (1) To evaluate the modus operandi of the planning and production of school broadcast programmes.
- (2) To study the extent of utilization of school broadcast programmes.
- (3) To assess the effectiveness of the programmes. And
- (4) To study the barriers, if any, standing in the way of the planning, production and utilization of such programmes

**Major findings:**

- (1) Only 20.50% of teachers were trained by the department with regard to the use of radio in the classroom and writing scripts for radio.
- (2) Only 54.43% of schools in the urban, and 27.27% of schools in the rural sector had the provision of a separate period in the timetable for listening to school broadcasts.
- (3) In the urban sector listening regularly was done by 54.43% of schools, which was higher than the schools (37.6%) of the rural sector.
- (4) According to 30.77% and 69.23% of respondents, the facts presented in the radio broadcasts were covered in the textbook to the maximum extent, and some extent, respectively.
- (5) The language used in the broadcast was simple for the students to the maximum extent, and to some extent, according to 23.72% and 76.28% of respondents, respectively.
- (6) As per the views of the teachers (urban.100%, and rural, 97.4%) the broadcast programmes were helpful to the students in their learning.
- (7) According to 66.47% and 33.53% of teachers, improvement of quality could be brought about in the sufficient affection was paid, respectively, to the production and the presentation of the programmes. (KCP 0474).

**Jaiswal, K, 1992.**

**A study of higher Education Science Educational Television Programmes in terms of their contents, presentation student's reactions and effectiveness. Ph.D. Edu. Devi Ahilya vishwavidyalaya.**

**Objectives:**

- (1) To analyses the higher Education Science Educational Television (ETV) Programmes in terms of their contents and presentation.
- (2) To find out the effectiveness of the higher Education science ETV, programs in terms of students achievement. And
- (3) To find-out student's reactions to higher Education Science ETV Programmes.

**Major findings:**

- (1) Most of the programmes (above 68%) focused on knowledge and on understanding objectives.
- (2) The majority of programmes (80% to 88%) had followed a logical sequence in presentation had covered the Teaching points adequately and had used languages appropriately.
- (3) Lecture with demonstration and illustrated take were found quite effective.
- (4) In all the programmes, except one the post-test scores of both the English and the Hindi media students were significantly higher than their per-test scores. These programmes included different subject areas like biology, chemistry, physics, computer and general science.( PKS 0643)

**Kapadia, A.M. 1992.**

**The impact of Television on students' learning; an exploration. Ph. D, Edu. South Gujarat Univ.**

**Objectives:**

- (1) To find out the impact of Television on students' learning.
- (2) To find out the comparative effectiveness of the Telifilms and the Tape-chart programmes. And
- (3) To get the opinion of students' and teachers regarding the two media used

**Major findings**

- (1) Significant improvement had been achieved after the treatment with the telifilm it was found effective for self-learning in both the group. It showed a significant gain in the spot test as well as in the retention test sores.
- (2) The telifilm was found more effective in both the groups than the tape-chart programmes in terms of achievement scores as well as retained knowledge.
- (3) Seventy-seven per cent of the student's opined. That television motivated self-learning.

**Samta Modi, 2009.**

**An impact study of Haryana EDUSAT programme of senior secondary schools in Faridabad.**

**Objective:**

- (1) To study the EDUSAT network in Haryana.
- (2) To compare the academic achievements of students of ROT Schools with that of their counterparts of NON-ROT schools.
- (3) To study the effectiveness of EDUSAT network on the academic achievement of student of students studying in Sr. Sec. Schools.

Major findings:

- (1) The overall average achievement level of children of senior secondary of ROT school is higher than that of the children of NON-ROT schools. This clearly reflects the efficacy of the transmission through EDUSAT.
- (2) The percentage of children of senior secondary schools in respect of many sub groups is higher than their counterparts of NON-ROT schools. But these differences are not very much.
- (3) On the basis of overall percentage the network is more effective on the academic achievement of students of ROT studying in senior secondary schools in district Faridabad.
- (4) There is a difference on academic achievement of students of ROT schools with their counterpart of NON-ROT schools.
- (5) The performance in Chemistry of children belonging to ROT schools is found to be higher than that of NON-ROT schools in senior secondary schools.
- (6) Researcher felt that students are taking more interest in classroom studies. For live video lecture, the resource persons are using multi media, including slides and video clippings. So that there is not only greater interest among the students, but also enhanced conceptual clarity of the subject.
- (7) There is more effect on attendance of senior secondary schools students of ROT. If a teacher is absent, it does not disturb the study of children.
- (8) The outcome from the present study is that for the science students of ROT in Government senior secondary schools, the full syllabus is being covered through EDUSAT.

### **DESIGN OF THE STUDY**

To collect data for the present study the investigator used survey method. Survey studies are conducted to collect the data of the related problem with a view to develop a research problem on EDUSAT programme in colleges.

Survey is conducted generally on a country, region, state, district, city, university system or some other unit. It is not always possible to contact each one under controlled conditions. Thus survey data can be collected from a representative sample. The survey may be of school survey, job analysis and documentary survey.

In the present investigation types of colleges are independent variables whereas edusat programme is the dependent variable. The main purpose of the study is to see that the effectiveness of EDUSAT programme in colleges or how far the independent variable influences the dependent variables.

### **POPULATION**

A population is defined as a group of individuals with at least one common characteristic which distinguished that group from other individuals. It is the entire group from which the sample is taken. Since all colleges of Faridabad constituted as the population for the purpose of the present study. The study was confined to both ROT and NON- ROT colleges to compare the academic achievement of students who had attended the programme delivered through EDUSAT.

### **SAMPLE**

It is not feasible to collect data of the whole population in any investigation. Sampling solves this dilemma. A sample is a miniature picture of the entire group or aggregate from which it has been taken. In other words, it is a small representation of large whole. With the help of sample the researcher to select representative units from which can gather data that permit him to draw inferences about the nature of entire population. Sampling is both essential and advantageous. It saves the investigator's time, money and energy.

The sample has been selected through incidental and purposive sampling techniques. The sample was drawn from Faridabad district of Haryana because it was convenient to collect data, since the investigator the lives in Faridabad. The sample of this study consist of 200 students in which 100 from ROT colleges 50-50 from two colleges and 100 from NON- ROT colleges colleges 50-50 from two colleges in Faridabad.

### **TOOLS USED IN STUDY**

Data collection is an integral part of research. Selection of tool is very important only a judiciously chosen tool can help us in analyzing and integrating correctly. John best observe, 'like the tool in the carpenter's box, each research tool is opportunities in a given situation to accomplish a particular purpose. There are so many tools for research but. In present study the investigator used the techniques of questionnaire and interview for data gathering . the questionnaire was developed with the help of colleges' teachers.

The interview technique was also used for collecting reactions of the expert group. This tool became helpful in

filling the gap, in supplementing as well as authenticating information given by experts. The items of interview schedule were prepared in structured and open ended forms, keeping in mind that it carried the same meaning and import for the study as collection of data via questionnaire technique. Thus both the techniques of questionnaire and interview were used for collecting the desired information.

### PROCEDURE FOR COLLECTION OF REACTIONS

The researcher contacted punchkula sec- 2 to get the addresses of colleges in which EDUSAT network is working. To get response from 200 students those are studying in colleges, the researcher prepared a questionnaire and visited in respective colleges to get it filled so that maximum number of responses from sample students will be received at the same time. The researcher explained the purpose and objectives of the study to the teachers. The researcher then administered the questionnaire, and received 200 filled questionnaire from sample courses. The final sample for this study, which may be taken as quite representative covering 100% of the stipulated and expected responses.

### ANALYSIS OF DATA

Analysis of data means studying the tabulated material in order to determine inherent facts or meanings. It involves breaking down existing complex factors into simples' parts and putting the parts together in new arrangements for purposes of interpretations.

In the present study analysis, interpretation of result has been provided sequentially and systematically. The focus of the study was to assess the effectiveness of EDUSAT on academic achievement of the students in colleges of Faridabad district, to compare the academic achievement of the students of ROT colleges with that of the NON ROT colleges the percentages test is used.

As a tool a questionnaire was developed with the concentration of NCERT, nuepa, IGNOU and guide. in this tool total 30 items are there. each item is having four options where one answer is right and others wrong.

According to per item researcher has compared achievement of students of ROT and NON ROT colleges with the help of % technique.

Comparison between ROT and NON ROT students for items.

items	ROT (100) students total	ROT (100students) %	NON ROT(100students) total	NON ROT (100) students %	
1	Correct response	75	75.00	35	35.00
	Incorrect response	25	25.00	65	65.00
2	Correct response	83	83.00	45	45.00
	Incorrect response	17	17.00	55	55.00
3	Correct response	67	67.00	42	42.00
	Incorrect response	33	33.00	58	58.00
4	Correct response	71	71.00	49	49.00
	Incorrect response	29	29.00	51	51.00
5	Correct response	67	67.00	41	41.00
	Incorrect response	33	33.00	59	59.00
6	Correct response	86	86.00	48	48.00
	Incorrect response	14	14.00	52	52.00
7	Correct	85	85.00	28	28.00



.	response				
	Incorrect response	15	15.00	72	72.00
8	Correct response	56	56.00	34	34.00
	Incorrect response	44	44.00	66	66.00
9	Correct response	82	82.00	40	40.00
	Incorrect response	18	18.00	60	60.00
10.	Correct response	68	68.00	28	28.00
	Incorrect response	32	32.00	72	72.00
11.	Correct response	91	91.00	49	49.00
	Incorrect response	9	9.00	51	51.00
12.	Correct response	80	80.00	46	46.00
	Incorrect response	20	20.00	54	54.00
13.	Correct response	89	89.00	25	25.00
	Incorrect response	11	11.00	75	75.00
14.	Correct response	69	69.00	17	17.00
	Incorrect response	31	31.00	83	83.00
15.	Correct response	68	68.00	33	33.00
	Incorrect response	32	32.00	67	67.00
16.	Correct response	67	67.00	36	36.00
	Incorrect response	33	33.00	64	64.00
17.	Correct response	83	83.00	46	46.00
	Incorrect response	17	17.00	54	54.00
18.	Correct response	73	73.00	28	28.00
	Incorrect response	27	27.00	72	72.00
19.	Correct response	68	68.00	43	43.00
	Incorrect response	32	32.00	57	57.00
20.	Correct response	89	89.00	31	31.00
	Incorrect	11	11.00	69	69.00

	response				
21.	Correct response	67	67.00	31	31.00
	Incorrect response	33	33.00	69	69.00
22.	Correct response	90	90.00	29	29.00
	Incorrect response	10	10.00	71	71.00
23.	Correct response	86	86.00	19	19.00
	Incorrect response	14	14.00	81	81.00
24.	Correct response	89	89.00	36	36.00
	Incorrect response	11	11.00	64	64.00
25.	Correct response	88	88.00	27	27.00
	Incorrect response	12	12.00	73	73.00
26.	Correct response	80	80.00	21	21.00
	Incorrect response	20	20.00	79	79.00
27.	Correct response	94	94.00	32	32.00
	Incorrect response	6	6.00	68	68.00
28.	Correct response	58	58.00	38	38.00
	Incorrect response	42	42.00	62	62.00
29.	Correct response	92	92.00	35	35.00
	Incorrect response	8	8.00	65	65.00
30.	Correct response	87	87.00	33	33.00
	Incorrect response	13	13.00	67	67.00

### INTERPRETATION

On the basis of above table it is clear that ROT students performed better than NON ROT students. So, we can say that the quality of EDUSAT programme is very good and students were enjoying in learning through EDUSAT. This programme is more effective in higher education learning. It is a great effect of our government in the quality of higher education.

### STATISTICAL TECHNIQUE USED

To test the hypotheses based on the objectives of the study, the following statistical techniques were used:

1. Mean
2. Standard deviation
3. 'T' test

### Testing of Hypothesis 1

- There is no significant difference of effectiveness of EDUSAT network on academic achievement of the student.

Sr. No	Variables	Mean score	SD pooled	't' calculated value
1.	ROT (100) students achievement score	78	10	17.2
2.	NON ROT(100students) achievement score	35		

Comparisons of mean score of ROT (100) students achievement score and NON ROT(100 students achievement score

Level of significance

0.05=2.00

0.01=2.66

### INTERPRETATION

Above Table shows that the mean score of ROT (100) students achievement score is high than NON ROT 100 students achievement score.

The calculated value of t (17.2) is more than table value of t at both significant levels (0.01&0.05). Therefore, Null Hypotheses is rejected and it can be concluded that there is significant difference in achievement score of ROT students and NON ROT

### CONCLUSION

The analysis and interpretation of the present study have reflected some findings the following major findings are given:-

- The overall average achievement level of students of ROT colleges than that of the students of NON ROT colleges. This clearly reflects the efficacy of the transmission through EDUSAT.
- The percentage of students of colleges in respect of many sub groups in higher than their counterpart of NON ROT colleges. But these differences are not very much.
- On the basis of overall percentage the network is more effective on the academic achievement of students of ROT studying in colleges in district Faridabad.
- There is difference on academic achievement of students of ROT colleges with their counterpart of NON ROT colleges.
- The performance in commerce of students belonging to Rot colleges is found to be higher than that of NON ROT colleges.
- Researcher felt that students are taking more interest in classroom studies. For live video lecture, the resource person is using multi media, including slides and video clippings. So that there is not only greater interest among the students, but also enhanced conceptual clarity of the subject.
- There is more effect on attendance of colleges' students of ROT. If a teacher absent, it does not disturb the study of students.
- The outcomes from the present study are that for the commerce students of ROT colleges the full syllabus is being covered through EDUSAT.

### EDUCATIONAL IMPLICATIONS

- Steps may be taken to mobilize block and district authorities to make funds available for these purpose.
- More focused attention is required to improve the participation of concerned subject teacher in interaction/ discussion session after the transmission. The following intervention strategies may be used for improving the quality of EDUSAT transmission.
- Information related to details of the topic to be transmitted, including class for which it is meant should be given through a programme schedule in advance to all colleges.
- Support material on each topic be prepared and supplied to concerned teachers in advance.
- Trained teachers be invited and involved during the development of content for the transmission. Suggestions of the local teachers be invited and duly acknowledged by incorporating them in the development of the content.
- Appropriate resource person who can easily communicated through local dialect be selected and invite for teaching from studio. Language used by tele- teachers should be simple and clear.
- Resource person may be asked to use more and more examples, illustrations and activity to develop the curiosity of students and make them participate actively in teaching learning process.

### DELIMITATIONS OF THE STUDY

- The study will be limited to district Faridabad.
- The study will be limited to college students.
- The study will be limited to only 200 students of college level.

## CONCLUSION

In my view Edusat may be a powerful mode of disseminating knowledge and information to each part of the country. This is a mode which strengthens the communication between the teaching end and learning end. It may be helpful in a scenario of shortage of teachers in the colleges, lack of quality teaching especially in the rural areas, teachers absenteeism, need of uniform quality education and need for improvement in teaching. so we can say that the edusat is playing a very important and smart role in the field of E-Education in India.

## REFERENCES

- Ashby,Eric,(1972)** " The Forth Revolution" Instructional Technology in Higher Education,( A Report of the camatic commission on higher education) MC Graw Hill Book Company, New York.
- Central Institute of Educational Technology, (1984)** "A Study into Utilization and Comprehensibility of School TV Programme at CIET,NCERT,New Delhi.
- DECU (2003)**, "Development and educational communication unit, ISRO, Ahemdabad.
- DECU (2004), Edusat** "A satellite dedicated to education, Ahemdabad DECU-SAC-ISRO.
- Bhaskaranarayana (2005)**, Edusat in Higher Technical Education University News, 43(39),pp 66-67.
- Bhaskaranarayana ,A et.al (2005)** PAN-African Network though satellite and fiber optics for tele cedicine and Tele Education. A project proposal jointly developed by officials of the Rashtrapati Bhawan , Indian Space Research Organization , Ministry of External Affairs Government of india TCIL and an expert from Indian Institute of Science, Bangalore.
- Nunez,Juan-y-Pedro Duran (2005)**, "Telesecundaria y la Red Satellite de Television Educativa" EDUSAT, SEP,Mexico, pp 5-6.
- Joshi H,(2004)** EDUSAT Utilization Process of Building partnership Ahemdabad, Development and Communication Unit, ISRO.
- Nair G.M, (2004)**, Development of Space Programme and its Impact on Education July 02, New Delhi.
- Modi Samta(2009)**, "An Impact Study of Haryana Edusat Programme of Senior Secondary Schools in Faridabad" MRCEd.Faridabad, Haryana.
- Buch M.B(Ed)(1979)** "A Survey of Research in Education" Broda,Society of Educational Research.
- Buch M.B (Ed) (2000)** "Six Survey Education Research"

## WEB REFERENCES

- [www.ignou.ac.in](http://www.ignou.ac.in)
- [www.isro.org.in](http://www.isro.org.in)
- [www.depssa.org.in](http://www.depssa.org.in)
- [www.ncert.ac.in](http://www.ncert.ac.in)
- [www.nuepa.ac.in](http://www.nuepa.ac.in)
- [www.satellitetoday.com](http://www.satellitetoday.com)
- [www.ciet.org.in](http://www.ciet.org.in)
- [www.ugc.ac.in](http://www.ugc.ac.in)

