VIDEO CONFERENCING TECHNOLOGY FOR AGRICULTURAL ADMINISTRATION

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Abstract: Agriculture is backbone of Indian Economy. Agriculture, the single largest private sector occupation provides employment to 56.7% of country's work force. Today a new paradigm of agricultural development is fast emerging: in both developing and developed countries the overall development of rural areas is expanding in new directions, old ways of delivering important services to citizens are being challenged and traditional societies are being transformed into knowledge societies all over the world. Several Government-Citizen (G-C) e-Government pilot projects have attempted to adopt these technologies to improve the reach, enhance the base, minimize the processing costs, increase transparency, and reduce the cycle times. Video conferencing is a facility for administration by Andhra Pradesh Government in 1999 through APTS (Andhra Pradesh Technological Services.

Keywords: Agriculture, Technology, video Conferencing, Administration.

Introduction: The Information and Communication Technologies are being increasingly used by the governments to deliver its services at the locations convenient to the citizens. The rural ICT applications attempt to offer the services of central agencies to the citizens at their village door steps. These applications utilize the ICT in offering improved and affordable connectivity and processing solutions. Several Government-Citizen e-Government pilot projects have attempted to adopt these technologies to improve the reach, enhance the base, minimize the processing costs, increase transparency, and reduce the cycle times. Broad basing agricultural extension activities developing farming system research and extension having location-specific modules of research and extension; and promoting market extension, sustainable agricultural development, participatory research, etc. are some of the numerous areas where ICT can play an important role.

Video Conferencing: Video conferencing is slowly became a part of the daily routine in the government of Andhra Pradesh. APSWAN is the backbone networks for voice, data and video communication throughout the state of Andhra Pradesh. The Video Conferencing facility was formally inaugurating on 1st November, 1999 and reviews the developmental programmes like "DEEPAM" with all 23 district collectors. This net work became operational with a 2 mbps fiber links connecting the state secretariat with 25 centers including all the district head quarters. (http://www.kn.pacebell.com/wired/vidconf/directory.html)

Video conferencing Technology: Video conferencing technology basically needs audio and video capturing equipment along with a facility for transmitting information between sites. A broadband satellite connection with studio-quality equipment facilitates excellent full-motion video conferencing. On the other hand, video conferencing can also be established using compressed video systems, running on standard internet or telephone networks. This greatly reduces the cost of video conferencing, though at the expense of quality. (http://www.jtap.ac.ukreports)

Video Conferencing in Governance : Governments across the world are using different applications of ICTs to meet specific challenges. Video conferencing is one specific application of ICT than can be put to good use in governance. Using Video Conferencing facilities the government to share information with its officials at all levels and regions, anywhere, regardless of the distance.

Specific benefits of application of Video Conferencing in governance:

- Administrative Reviews and Conferences
- Distance and On-line training for Government officials
- Demonstration of best practices from the departments
- Fast transmission of technology from lab to land.
- Speeding up of decision making
- Decentralization of authority.
- Fostering an online and accountable government.

Agricultural extension systems in India: Small-scale farmers make up about 70 percent of India's farming community, but experience deep economic and social inequities in comparison to large land-holding farmers. Indeed, recent studies have revealed that most small-scale farmers no longer view farming as a sustainable livelihood source. Even Mr Santosh Sharma, who is regarded as a relatively well-off farmer in his village, says, "Farming is no longer a dependable source of income. It was during my father's and grandfather's generations, but now everything is changing, from the market to the environment. Now I tell my children that they should study well and get jobs outside the village, because that is the only way they can have a good life."

Statement of the Problem: Video Conferencing is a communication plat form for implementing various

programmes for Agricultural Administration by Andhra Pradesh Government.

Tool of Research: The collection of data is through in-depth interviews with all officials involved in video conferencing in selected places in three regions of Andhra Pradesh. Analyzing video conferencing involved two components - understanding the criteria adopted to organize the video conferencing itself and understanding the impact of video conferencing. This understanding evolved through in-depth interviews with the revenue officials participated in video conferencing with the help of four different schedules.

In addition, secondary data was collected from the internet (Andhra Pradesh Technological Services) and also from the registers maintained by the revenue officials. Moreover the researcher personally participated in five video conferences closely to understand the modalities of video conference to develop the schedules. The researcher observed the issues discussed, interactions among the officials, interaction between officials and beneficiaries, participation of various departments, duration of the video conferences, feed back mechanism, implementation of schemes, monitoring and follow up of the programmes. The data collected through Participant – Observation Technique by video conferencing greatly helped to develop the tool for study.

Objectives Ofthe Study:

1. To find out the profile of respondents like gender, age and educational qualification.
2. To find out the level of satisfaction of the respondents in implementing the video conferencing in the area of agriculture with respect to their personal variables like gender, age and educational qualification.
3. To find out the opinions of respondents about effective implementation of schemes in the area of agriculture through video conferencing.

Hypotheses of the Study: The following hypotheses are formulated for the study.

1. The educational qualifications of the participants is directly associated with the level of satisfaction regarding implementation of video conferencing.
2. The age of the participants is directly associated with the level of satisfaction for participating in video conferencing.

Method of Study :The method used to collect the data was interview method. The two stage sampling technique was used to select the sample for the study. Initially the researcher considered all the three regions in Andhra Pradesh, viz., Coastal, Telangana and Rayalaseema. In the first stage, the researcher selected five places i.e., Hyderabad, Warangal, Machilipatnam, Nellore and Chittoor proportionately at random covering all the above regions where video conferencing is implemented. Video conferencing is conducted in 27 areas.

In the second stage the agriculture area was chosen as they were considered important services which increasingly help to improve the quality of life of people. The Universe of the study is 35 officials of different hierarchical positions irrespective of their age, gender who have participated in the video conferencing in the selected area. The researcher contacted all the officials participated in video conferencing in 23 districts in the five selected places in the three regions of Andhra Pradesh.

Sources of Data: Database of the study includes both primary and secondary data. Primary data were collected through individuals using a structured questionnaire. First-hand information has been collected from the Officials who are working in the department of Agriculture in 5 Districts of Andhra Pradesh..

The secondary data required for the study were collected from journals, published documents, and websites.

Scope of the Study: The purpose of the study is to know the implementation of videoconferencing in agricultural administration of Andhra Pradesh Government.

Limitations of the Study:

1. The study is confined to the viewpoint of Department of Agriculture in Andhra Pradesh only. The results of the study may not be applicable to other places of the country.
2. Though the researcher takes adequate care to make the respondents express their views frankly and freely, some of the views expressed by them are biased in nature that may affect the findings of the study;
3. By considering the time factor, randomly 5 districts were taken as sample for the study.

Method of Analysis: The total scores obtained for each of the 35 respondents with several variables were computed. The data was carefully coded and analyzed by employing relevant statistical techniques. To judge the objectives of the study, descriptive statistics, frequency tables, cross tabulations diagrammatic and graphical representations were used. To test the hypotheses, Chi-square test, t-test and one-way ANOVA were used.

Results of the Study: Video Conferencing is an integration of interaction, information and Communication Technologies. It is convergence and culmination of electronic communication and computer technologies. It is a two-way audio-video meeting in real time between and amongst people presented geographically dispersed locations.

List of Participants in the Video Conferencing from the Government

S.No.	Participants	
1	Ministers	Chief Minister and other Ministers
2	Collectors	Collectors Deputy Collector and Joint Collector
3	Secretaries	Chief secretary to the Government Personal Secretary to the Government Assistant Secretary
4	Commissioners	Commissioner Assistant Commissioner Deputy Commissioner
5	Directors	Executive Director Joint Director Regional Director Managing Director Additional Director Project Director
7	Engineers	Executive Engineer Senior Engineer Chief Engineer
8	Officers	Community Project Officer Chief Executive Officer Divisional Officer Agriculture Officer Additional Executive Officer Divisional executive officer Mandal Parishad Development Officer, District Medical And Health Officer District Statistical Officer Executive Officer Superintendents

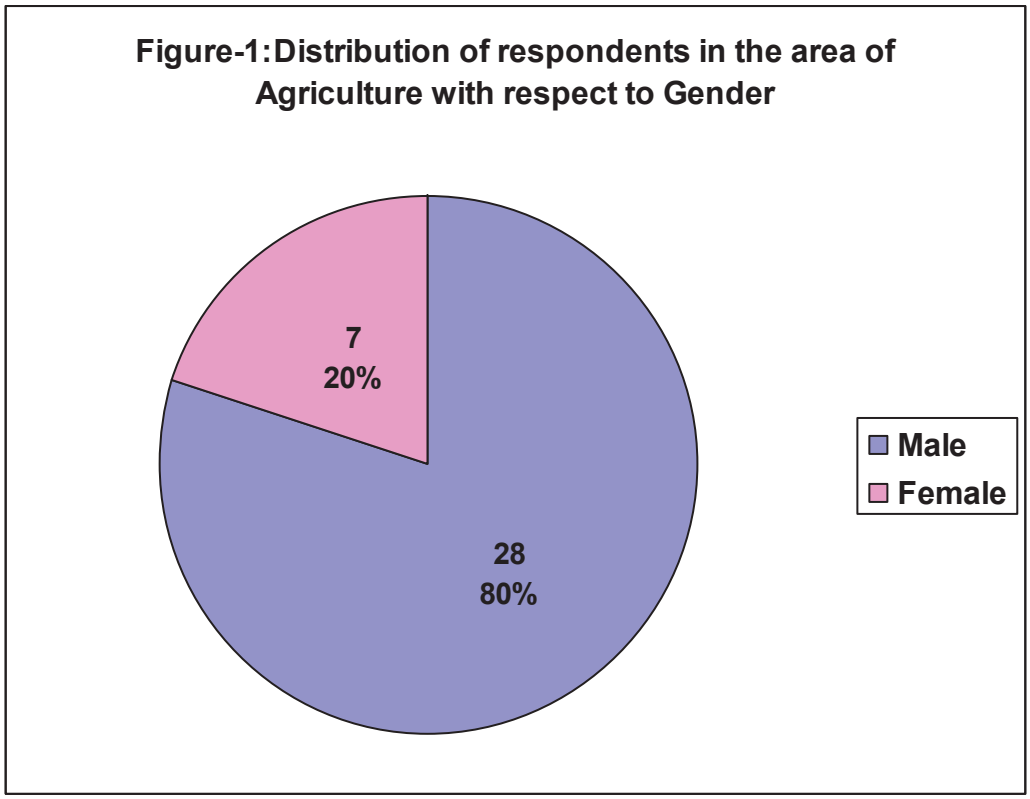
List of Participants in Video Conferencing in the area of Agriculture from the Government

Offices	Participants in Agriculture
Commission rate	Commissioner, Joint Director, Assistant Director, Deputy Director
Divisional Office	Commissioner, Joint Director, Assistant Director, Deputy Director
District Office	Deputy Director, Assistant Director, Additional Director, Agricultural Officer
Farmer Training Centre	Assistant Director,

	Agricultural Officer,
Soil Test Lab	Assistant Director, Programming Officer, Statistician

Frequency Tables: The distribution of total respondents were interviewed with regard to Agricultural aspects in Video Conferencing with respect to their personal variables along with percentages are listed below.

Distribution of Respondents with Respect to Gender in the Area of Agriculture		
Gender	**Frequency**	**Percent**
Male	28	80.0
Female	7	20.0
Total	**35**	**100.0**



Summary: Information Technology, however, is used as an effective instrument of growth and change. It is being brought into the mainstream of economic planning in the sectors of agriculture, industries and services. The country's resources are used to derive the maximum output for the benefit of society and improvement in the quality of life. Today a new paradigm of development where ICTs play a crucial role in delivering important services to citizens has emerged. The main goals of e-governance are to improve the efficiency of public administration.

To test the hypothesis, Chi-square test, t-test and one-way ANOVA were used.

It is observed from the study that the implementation of video conferencing for administration affects how tasks can be done and how work can be organized, but that does not mean that those tasks or the nature of work itself will be altered in fundamental ways. Experience with the implementation of video conferencing has shown how the technology is useful in cases of administrative use and reform. Hence, the Study is being organized in the three selected Agriculture area.

Major findings:

- The Government conducted a good no. of Video conferences to improve the agricultural status in Andhra Pradesh. Hence out of 35 respondents in three different regions of Andhra Pradesh 62.9% of them were satisfied with the no. of Video Conferences held by the Government.

- A majority 83.3% of the respondents felt that the research centers are sometimes playing a vital role in telecasting weather reports.
- All the respondents opined that beneficiaries are being participated in Video conferencing on agriculture.
- There is no significant difference between male and female respondents with respect to mean satisfaction levels on effective implementation of schemes in the area of Agriculture.
- There is no significant effect of age in expressing their satisfaction on effective implementation of schemes in the area of Agriculture.
- It was observed from the study that the satisfaction levels of Male and Female respondents seems to be similar in the area of Agriculture and it was also identified there is no impact of their educational qualifications and place of study in expressing their views on satisfaction regarding the implementation of Video Conferencing.

Suggestions: In the light of the findings of the study the following suggestions may be made for proper implementation and monitoring of the video conferencing facility.

- It is concluded from the study that video conferencing has never been an instrument of administrative reform rather it has been used to reinforce existing administrative and political arrangements.
- The question of whether expectations from the implementation of video conferencing are realized depends on what those expectations are.
- It is suggested that more number of beneficiaries should be involved in video conferencing directly to get immediate feedback in order to assess the policies and programmes for their use and development.
- The officials must be updated their skills with latest technological developments to have ease with technology.
- It is evident from the present study that even though the video conferences are held frequently but there is lack of regularity and continuity and this should be overcome with proper planning.
- The awareness levels of video conferencing among the general public is very much meagre. Hence, proper publicity measures can be taken by the government for effective implementation and people's participation.

Suggestions for Future Research: This research has significant academic achievement and policy implications. It provides a basis to develop new analytical frame work of video conferencing.

- The research study pertaining to the beneficiaries of the services of e-government systems in general and facilities like video conferencing in particular can be taken up.
- Similar studies in the areas other than the studied through this research would be taken up.
- In depth studies must be undertaken relating to skill, knowledge and experience of people using ICT in government and private organizations.
- Empirical studies can be taken up with large sample to understand the use of ICT for sustainable human development.
- There is need for documentation of statistics on video conferencing so that an opportunity for review of developmental issues can be focused.

Conclusion: The schemes regarding agriculture were effectively achieved by monitoring them through Video conferencing.

82% of the respondents opined that Rythu Bazars monitored by the Video Conferences are very useful to the farmers in marketing their yields systematically which ultimately protects them from the clutches of the mediators.

72% of the respondents felt that micro irrigation facilities are implemented satisfactorily in connection with the growth of farmers through video conferencing and there is also strong association between region of study and implementation of micro irrigation facilities in the identified areas.

In the area of Agriculture, 80% are male and 20% are female. Among them 29% of the respondents fall in the age group of 20-40 years and rest of them within the age group 40-60 Years.

With regard to the educational qualifications it is noticed that 57% are graduates, 37% are Post-Graduates and 6% of the respondents had higher qualification.

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