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Applicability of Information and Communication Technology (ICT) Tools by Various Animal Husbandry (A.H.) Organizations in Andhra Pradesh

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ABSTRACT: Data was collected from 33 organizations which were actively involved in Animal Husbandry activities and elicited through a questionnaire following an exploratory research design on "Utilization of Information and Communication Technology (ICT) tools by various organizations in Animal Husbandry – A study in Andhra Pradesh." The findings in applicability brought out that all the organizations agreed that ICT tools are useful for retrieving latest knowledge, quick transmission of reports to higher authorities and helps in quick and timely decision making. Majority have indicated that the employees are more dependant on ICT tools, it is difficult to work without the aid of ICT tools, effective utilization of ICT tools is possible and ICTs are mostly used for report submission. Majority of the organizations disagreed to the statements of difficulty in the use of ICT because of its cost and ICTs are not compatible with existing traditional methods while mixed responses was obtained for the statement that they lost natural mathematical or analytical skills after the advent of ICTs.

KEY WORDS: ICT, Applicability of ICT, Animal Husbandry organizations

I.INTRODUCTION

India is a country in which agriculture occupies a central position in the socioeconomic milieu of the rural people. Despite the growth of the other areas of the economy, Agriculture still provides livelihood for approximately 60% of the population dwelling in the rural areas and its contribution to GDP is approximately 22% (Kumar, 2005).

Information Technology has connected the world globally and is now changing our lifestyle. There is no area of human life that has been untouched by IT sector. Agriculture and Animal husbandry has also been influenced by IT in the present scenario of IT revolution although the share of IT in agriculture is only 1.3% (Chargotra, 2006). ICTs are a diverse set of technological tools and resources to create, disseminate, store, bring value addition and manage information.

In order to transform livestock sector into information driven, modern and competitive sector, the role of Information and Communication Technology (ICT) cannot be overruled. They provide faster and newer ways of delivering and accessing information. The people working in the livestock sector are least equipped with proper tools to deal with rapidly changing livestock production scenario and international competitive environment. At present, the ratio of the farmers to the extension workers is 1000:1(Kumar, 2005), also the existing transfer of technology mechanisms and extension programmes run by the government departments are slow and in many cases ineffective in view of the vast gaps between the research and farmers linkages. This is partly due to inadequate use of new areas of information dissemination in various development programmes. The introduction of ICT helps in upgrading the information at least cost.

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Information technology has demonstrated its utility and advantages in all elements of human life and especially in vocations of agriculture and allied sectors enhancing the productivity either directly or indirectly. The existing "technology divide" can be addressed effectively through the use of ICT, especially when the present system is no longer relevant and able to meet the increasing demands of our farming community. In a fast changing global environment, livestock production has to be more dynamic so as to harness the latest technologies and emerging opportunities due to globalization. The emergence of Rural Knowledge Centers and information kiosk in our country, promoted by NGOs and corporate sector, have demonstrated that the local Panchayats and self-help groups can take advantage of appropriate information and communication technologies and with this facility, they can easily access the scientific and technical knowledge they need, to solve the problems with greater precision. Keeping the enormous contribution of livestock to the GDP and the scope of livestock sector in employment generation and improving the living standards of the farmers as well as irreplaceable role of Information and Communication technology tools in livestock sector, the stake holders have paved the way to utilize ICT tools in livestock sector.

OBJECTIVES OF THE STUDY

1. To know the applicability of ICT tools utilized by the Animal Husbandry organizations.

II. METHODOLOGY

The study was purposively conducted in Hyderabad and Rangareddy districts of Andhra Pradesh as most of the Animal Husbandry organizations are located in these two districts. A total of 33 organizations which are actively involved in Animal Husbandry activities were selected for the purpose of study. Several organizations involved in the livestock development either directly or indirectly in Andhra Pradesh were ascertained in consultation with various sources viz. consultation with experts, secondary sources such as reports, literature, documents etc. The questionnaire for the organizations was developed in consultation with experts in the field of Animal Husbandry extension and those involved in computer applications. Rapport with the representatives of organizations is very essential so as to get accurate responses. In the present study the investigator established initial rapport with the organizations selected for the study and got acquainted with the officials personally. Later after the development of the questionnaire the investigator handed over the questionnaire to the concerned officials of the selected organizations and elicited their responses through the questionnaire. Questionnaire was prepared in English and data was collected from 33 organizations. It was made sure that all the questions in the questionnaire were self explanatory. Statistical tools used for analysis of data included frequency and percentages.

III. RESULTS AND DISCUSSION

A total of 33 organizations which are actively involved in Animal Husbandry activities were selected for the purpose of study. Based on the nature of work, functions, type of administration, the organizations considered for the study were grouped into five categories for better presentation of the results and subsequent discussion. They are:

1. Service Providers
2. Financial Organizations
3. Educational and Research Organizations
4. Non Governmental Organizations and Cooperative Organizations
5. Private Organizations

The different organizations were categorized into the above five categories are detailed below.

I. Service Providers:

1. State Animal Husbandry Department

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2. Commissionerate of Rural Development -Rural Livelihood project
3. Andhra Pradesh Livestock Development Agency (APLDA)
4. Andhra Pradesh Meat Development Corporation (APMDC)
5. State Management Institute for Livestock Development in Andhra Pradesh (SMILDA)

II. Financial Organizations:

1. National Bank for Agriculture and Rural Development (NABARD)
2. Andhra Pradesh Cooperative Bank (APCOB)
3. State Bank of India -Agri business unit (SBI)
4. Bharatiya Samruddhi Investments and Consulting Services Limited (BASIX)

III. Educational and Research Organizations:

1. National Institute of Rural Development (NIRD)
2. National Academy of Agricultural Research Management (NAARM)
3. Project Directorate on Poultry (PDP)
4. Central Research Institute for Dryland Agriculture (CRIDA)
5. National Research Centre on Meat N(NRC on Meat)
6. Sri Venkateswara Veterinary University -College of Veterinary Science, Hyderabad (SVVU)
7. Veterinary Biologicals Research Institute (VBRI)
8. Indian Immunologicals

IV. Non Governmental Organizations and Cooperative Organizations:

1. JK Trust Gram Vikas Yojana
2. ANTHRA
3. Watershed Support Services and Activities Network
4. InterCooperation Social Development
5. Andhra Pradesh Dairy Development Cooperative Federation (APDDCF)
6. National Egg Coordination Committee (NECC)

V. Private Organizations:

1. Venkateswara Hatcheries
2. Suguna Poultry
3. IndBro Research and Breeding farms
4. Poshak Feeds Private Limited
5. Vimala feeds Private Limited

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6. Miracle Feeds Private Limited
7. Intas Pharmaceuticals Limited
8. Neospark drugs and chemicals Limited
9. Sarabhai Zydus Animal Health Limited
10. Natural Remedies Private Limited

Applicability of ICT tools by various A.H. organizations

It was operationalised as the level expression of organizations on the usability of various ICT tools, which reflects availability, utility and compatibility. The responses of various organizations were expressed as frequencies and percentages.

It consisted of 10 statements. The response for each statement was rated on a three point continuum i.e. agree, undecided and disagree with weightages of 3, 2 and 1 respectively for positive statements and 1, 2, 3 for negative statements. The maximum score an organization obtained was 30 and minimum score could be 10. Frequencies and percentages were calculated.

Applicability of ICT tools by Service Providers

Table 1: Applicability of ICT tools by Service Providers

n= 5

S.No.	Statements	Agree		Undecided		Disagree	
		f	%	f	%	f	%
i.	The employees are more dependant on ICT tools	3	60	1	20	1	20
ii.	Without ICTs it is difficult to work	3	60	1	20	1	20
iii.	ICTs are mostly used for report submission	5	100	_	_	_	_
iv.	ICTs are useful for retrieving latest knowledge	5	100	_	_	_	_
v.	It is difficult to use ICTs in the organization because of its cost	_	_	_	_	5	100
vi.	ICTs are not compatible with existing traditional methods	_	_	2	40	3	60
vii.	Lost natural mathematical or analytical skills after the advent of ICTs	1	20	1	20	3	60
viii.	Effective utilization of ICTs is possible	4	80	1	20	_	_
ix.	Quick transmission of reports to higher authorities is possible	5	100	_	_	_	_
x.	They help in quick and timely decision making	5	100	_	_	_	_

It could be seen from the Table 1 that among Service Providers, all of them agreed that ICTs are useful in retrieving latest knowledge, quick transmission of reports to higher authorities is possible through ICTs and helps in

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quickly and timely decision making while 80% of the organizations agreed that ICTs are mostly used for report submission and its effective utilization is possible and 60% agreed that the employees are more dependant on ICT tools and without the same it is difficult to work. Present trend clearly indicated that the service providing organizations had perceived the benefits of ICT in their day to day activities and to improve their professional competencies. Now-a-days the service providing organizations such as Animal Husbandry departments are more involved in various developmental programmes leading to non availability of time for professional development and there by increasing the utility of ICT tools.

But over half of the organizations disagreed that ICTs are not compatible with existing traditional methods and to the point that they lost natural mathematical or analytical skills after the advent of ICTs; transformation from traditional methods to modern gadgets requires change in the attitude of the top bosses. Cent percent of the respondents disagreed to the statement that it is difficult to use ICTs in the organization because of its cost.

Applicability of ICT tools by Financial Organizations

Table 2: Applicability of ICT tools by Financial Organizations

n= 4

S.No.	Statements	Agree		Undecided		Disagree	
		f	%	f	%	f	%
i.	The employees are more dependant on ICT tools	4	100	_	_	_	_
ii.	Without ICTs it is difficult to work	4	100	_	_	_	_
iii.	ICTs are mostly used for report submission	3	75	_	_	1	25
iv.	ICTs are useful for retrieving latest knowledge	4	100	_	_	_	_
v.	It is difficult to use ICTs in the organization because of its cost	_	_	_	_	4	100
vi.	ICTs are not compatible with existing traditional methods	_	_	_	_	4	100
vii.	Lost natural mathematical or analytical skills after the advent of ICTs	2	50	_	_	2	50
viii.	Effective utilization of ICTs is possible	4	100	_	_	_	_
ix.	Quick transmission of reports to higher authorities is possible	4	100	_	_	_	_
x.	They help in quick and timely decision making	4	100	_	_	_	_

The findings from Table 2 revealed that cent percent of the Financial Organizations agreed that the employees are more dependant on ICT tools, without ICTs it is difficult to work, ICTs are useful for retrieving latest knowledge, effective utilization of ICTs is possible, quick transmission of reports to higher authorities is possible with the help of ICTs and they help in quick and timely decision making. 75% of them agreed that ICTs are mostly used for report submission. Similar perception to that of service providing organization was observed among financial organizations also with little variation in the magnitude of responses. It is a well established fact that the penetration of ICT tools is very much vibrant in the Indian society, as evident from the fact that, internet registered a growth rate of 740% from 2000 to 2007. (http://www.internetworldstats.com). The mobile sector had grown from around 10 million subscribers in 2002 to 150

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million by the start of 2007. Teledensity in India has increased from 1.9 in 1998 to 18.47 in 2006 compared to world's teledensity of 60.17.

About half of the organizations agreed that they lost natural mathematical or analytical skills after the emergence of ICTs. All the financial organizations disagreed to the statement that it was difficult to use ICTs in the organization because of cost and ICTs are not compatible with existing the traditional methods.

Applicability of ICT tools by Educational and Research Organizations

Table 3: Applicability of ICT tools by Educational and Research Organizations

n= 8

S.No.	Statements	Agree		Undecided		Disagree	
		f	%	f	%	f	%
i.	The employees are more dependant on ICT tools	5	62.5	1	12.5	2	25
ii.	Without ICTs it is difficult to work	6	75	1	12.5	1	12.5
iii.	ICTs are mostly used for report submission	5	62.5	1	12.5	2	25
iv.	ICTs are useful for retrieving latest knowledge	8	100	_	_	_	_
v.	It is difficult to use ICTs in the organization because of its cost	_	_	1	12.5	7	87.5
vi.	ICTs are not compatible with existing traditional methods	_	_	1	12.5	7	87.5
vii.	Lost natural mathematical or analytical skills after the advent of ICTs	1	12.5	2	25	5	67.5
viii.	Effective utilization of ICTs is possible	8	100	_	_	_	_
ix.	Quick transmission of reports to higher authorities is possible	8	100	_	_	_	_
x.	They help in quick and timely decision making	8	100	_	_	_	_

The findings from the Table 3 indicated that all of the Educational and Research Organizations agreed that ICTs are mostly used for retrieving latest knowledge, effective utilization of ICTs is possible, with the help of ICTs quick transmission of reports to higher authorities is possible and they help in quick and timely decision making. 75% agreed that without ICTs it is difficult to work while an equal percent of 12.5% of them were undecided and disagreed the above statement.62.5 % agreed to the statement that ICTs are mostly used for report submission while an equal percent of 12.5% were undecided and disagreed to the above reason. 87.5 % disagreed to the statement that it is difficult to use ICTs in the organization because of cost and they are not compatible with existing traditional methods while 12.5% were undecided. 67.5% disagreed that they lost natural mathematical or analytical skills after the advent of ICTs. The Educational and Research Organizations included in the present study focus on their mandate that is to carry out basic, applied and strategic research, policy support, efficiency and effectiveness of NARS, initiation and sustain development in the veterinary field, epidemiological studies etc which always demands updated information to commensurate with the global trends in the respective areas. So the Educational and Research Organizations are utilizing the ICT tools to the utmost extent.

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Applicability of ICT tools by Non Governmental Organizations and Cooperative organizations

Table 4 revealed that all of the Non Governmental Organizations and Cooperative organizations agreed that ICTs are mostly useful for retrieving latest knowledge, effective utilization of ICTs is possible, with ICTs quick transmission of reports to higher authorities is possible and they help in quick and timely decision making. 66.6% agreed that their employees are more dependant on ICT tools where as 33.3% were undecided on this and without ICTs it is difficult to work where as 49.9% agreed that ICTs are mostly used for report submission as against 3.3% who were undecided to the statement while 16.7% disagreed to the statement.

In general, the NGOs are provided with limited budget and allocation for ICT tools appears to be minimal, as their sustainability depends on the output they generate rather than the infrastructure they possess. So about two thirds of organizations are skeptic about the use of ICTs in the organization because of its cost and they are not compatible with existing traditional methods. An overall response of different organizations indicated that they had lost the natural mathematical or analytical skills after the advent of ICTs as also perceived by NGOs. With advent of new technologies, the traditional memory recall methods have changed and or replaced with modern storage devices / methods; dependence on these modern gadgets increased. The accessibility and availability are sufficient; loss of natural mathematical or analytical skills may not be a big problem.

Table 4: Applicability of ICT tools by Non Governmental Organizations and Cooperative Organizations

n= 6

S.No.	Statements	Agree		Undecided		Disagree	
		f	%	f	%	f	%
i.	The employees are more dependant on ICT tools	4	66.6	2	33.3	_	_
ii.	Without ICTs it is difficult to work	4	66.6	2	33.3	_	_
iii.	ICTs are mostly used for report submission	3	49.8	2	33.3	1	16.7
iv.	ICTs are useful for retrieving latest knowledge	6	100	_	_	_	_
v.	It is difficult to use ICTs in the organization because of its cost	_	_	2	33.3	4	66.6
vi.	ICTs are not compatible with existing traditional methods	_	_	2	33.3	4	66.6
vii.	Lost natural mathematical or analytical skills after the advent of ICTs	3	49.8	1	16.7	2	33.3
viii.	Effective utilization of ICTs is possible	6	100	_	_	_	_
ix.	Quick transmission of reports to higher authorities is possible	6	100	_	_	_	_
x.	They help in quick and timely decision making	6	100	_	_	_	_

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Applicability of ICT tools by Private Organizations

Results given in the Table 5 revealed that all of the Private Organizations agreed that ICTs are useful for retrieving latest knowledge, effective utilization of ICTs is possible, quick transmission of reports to higher authorities is possible with the help of ICTs and they help in quick and timely decision making. 70% agreed that their employees are more dependant on ICT tools, 80% opined that without ICTs it is difficult to work, 60% agreed that ICTs are mostly used for report submission. 80% of them disagreed to the statement that it is difficult to use ICTs in the organization because of their cost. 60% disagreed that ICTs are not compatible with existing traditional methods. 50% were undecided to the statement that their natural mathematical or analytical skills are affected after the advent of ICTs. The Private organizations are mainly commercially oriented and so they might have recognized the importance of ICT as their profits depend on the marketing of products which could be increased with the utilization of these tools in knowing the latest trends and up to date information.

Table 5: Applicability of ICT tools by Private Organizations

n= 10

S.No.	Statements	Agree		Undecided		Disagree	
		f	%	f	%	f	%
i.	The employees are more dependant on ICT tools	7	70	1	10	2	20
ii.	Without ICTs it is difficult to work	8	80	_	_	2	20
iii.	ICTs are mostly used for report submission	6	60	3	30	1	10
iv.	ICTs are useful for retrieving latest knowledge	10	100	_	_	_	_
v.	It is difficult to use ICT s in the organization because of its cost	_	_	2	20	8	80
vi.	ICTs are not compatible with existing traditional methods	1	10	3	30	6	60
vii.	Lost natural mathematical or analytical skills after the advent of ICTs	1	10	5	50	4	40
viii.	Effective utilization of ICTs is possible	10	100	_	_	_	_
ix.	Quick transmission of reports to higher authorities is possible	10	100	_	_	_	_
x.	They help in quick and timely decision making	10	100	_	_	_	_

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