



## ATTITUDE OF STAKEHOLDERS TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs) BASED EXTENSION SERVICES

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### ABSTRACT

Harnessing ICTs in agriculture received high priority which can be used vary widely in the promotion of agricultural technologies. With this technology revolution several ICT initiatives have been in operation in India. Study was formulated to measure the attitude of stakeholders towards ICT based extension services offered by *e-sagu*, *e-choupal* and VASAT ICT initiatives in Andhrapradesh. In this study Attitude was operationalised as the degree of positive or negative feeling of stakeholders i.e., farmers, extension services providers and ICT functionaries towards the information communication Technologies (ICTs) based extension services. Sample size of 150 farmers availing ICT extension services, 60 farmers availing non ICT extension services were selected randomly and 60 extension service providers and 15 ICT functionaries were selected purposively. Attitude of farmers and extension service providers towards ICT based extension was measured with the help of attitude scale developed for this study. The results indicated that vast majority (71.34%) of farmers had favourable attitude, where as 15.33 per cent has more favorable attitude towards ICT based extension services. More than half of (66.70%) extension service providers had favorable attitude towards ICT based extension services followed by more favourable (18.33%) and less favourable (15.00%) attitude. With regard to ICT functionaries only 40 per cent had favourable attitude and 33.33 per cent had less favourable attitude towards ICT extension service profession.

**KEYWORDS:** ICT, Stakeholders, Information, Extension services.

### INTRODUCTION

Agriculture continues to be the occupation and way of life for more than half of Indian population even today making single largest contribution to the GDP accounting for 18 per cent of the total. Sustainable prosperity of this class of farmers and the land less agricultural laborers holds the key for improving the overall human resource development scenario in the country.

In this context, quick dissemination of technological information from agricultural research system to the farmers in the field and reporting of farmers feed back to the research system is one of the critical inputs in dissemination of agricultural technology. The information and communication support during past 50 years has mainly been through conventional methods. Agricultural extension which depends to a large extent on information exchange between and among farmers on the one hand and a broad range of other factors on the other, has been identified as one area in which ICTs can play a significant role. Harnessing ICTs in agriculture received high priority

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### MATERIAL AND METHODS

Exploratory research design was adopted for conducting the study. The study was conducted in Warangal, Adilabad and Mahaboobnagar districts of Andhra Pradesh, where ICT initiatives *e-sagu*, *e-choupal* and VASAT were implemented respectively. These districts were selected purposively because the above said ICT initiatives are functioning at these districts for the past three years. Apart from these districts three districts

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from three regions of Andhra Pradesh were selected randomly for those who are not availing services of ICT initiatives are Anantapur from Rayalaseema region, Nalgonda from Telangana region and Krishna from Coastal region. From each ICT project area two villages were selected randomly. Twenty five farmers from each village, who are availing ICT services were selected randomly. Thus making a total of 150 farmers constituted the sample for the study. For non-ICT farmers, one mandal selected randomly from each selected district and two villages selected randomly from these mandals. Thus making a total of six villages for non ICT area. 10 farmers from each village were selected randomly from non ICT area thus making a total of 60 farmers.

Apart from 3 ICT projects, extension service providers from Kisan Call Centers (1551, ANGRAU 1100) and farm telecast program of government of A.P. (Rytu Nestam) were considered relevant for this study. To obtain information with regard to ICT based extension services, 10 from each above center were selected to get their attitude and problems in delivering ICT enabled extension services. All the functionaries of the three ICT projects viz., e-sagu, e-choupal and VASAT constituted the population of the study for collecting data regarding orientation towards ICT based extension services. Five functionaries from each project were selected randomly. Thus a total of 15 were selected. In this study measurement of attitude of farmers and extension service providers towards ICTs based extension services was measured with Attitude scale was developed using the Likert method of summated rating.

## RESULTS AND DISCUSSION

### Attitude of farmers towards ICT based extension services

Attitude of farmers towards ICT based extension was measured with the help of attitude scale. The respondents were categorized into three groups viz., less favourable attitude, favourable attitude and more favourable attitude based on mean and standard deviation. It is clear from the Table 1 that majority of the (60.00%) farmers in e-sagu area had favourable attitude towards ICT based extension followed by more favourable (28.00%) and less favourable (12.00%). In case of e-choupal vast majority (64.00%) had favourable attitude followed by more favourable (20.00 %) and less favourable (16.00%)

attitude. Whereas farmers in VASAT area majority (64.00%) had favourable attitude followed by less favourable (24.00%) and more favourable (12.00%) attitude towards ICT based extension services. The results of pooled data indicate that vast majority (71.34%) had favourable attitude followed by more favourable (15.33%) and less (13.33%) favourable attitude towards ICT based extension.

### Attitude of non-ICT farmers towards ICT based extension services

Table 2 revealed that majority of the farmers (66.70%) in non-ICT project area had favourable attitude towards ICT based extension services followed by less favourable (20.00%) and more favourable (13.30%) attitude. But their mean scores (61.41) are on par with the score of ICT farmers (62.87). This might be because of still majority of the farmers depending on informal sources such as input dealers, peer farmers, friends and relatives to get information related agricultural problems. And they are not getting appropriate information in a timely manner from existing extension system. They thought that extension services delivered on using ICT tools may break the barriers in obtaining the relevant information at opportune time. So the above result was noticed.

### Attitude of extension service providers towards ICT based extension services

Attitude of extension service providers towards ICT based extension was measured with the help of attitude scale developed by Likert method of summated rating. The respondents were categorized into three groups viz., less favourable attitude, favourable attitude and more favourable attitude based on mean and standard deviation.

From the table 3 it is clear that majority (66.60%) of the respondents had favourable attitude towards ICT based extension followed by more favourable (18.33%) and less favourable (15.00 %) attitude. This is due to the fact Indian agriculture witnessed change of subsistence agriculture into a commercial activity. With this farmers' information needs are diversified. Traditional extension system and its approach failed to meet the needs of all the farmers in a timely manner. By using ICTs to reach the needy farmers this gulf can be bridged, where it can improve the accessibility to the information sources but also its relevance to local development. Hence this result was noticed. These findings were in partial conformity with Nagalakshmi (2008).

Attitude of stakeholders towards ICTs

**Table 1. Distribution of farmers according to their attitude towards ICT based extension services**

N=150

| S. No. | Attitude        | <i>e-sagu</i> (n=50) | <i>e-choupal</i> (n=50) | VASAT (n=50) | Total N = 150 |
|--------|-----------------|----------------------|-------------------------|--------------|---------------|
| 1      | Less favourable | 6 (12)               | 8 (16)                  | 12 (24)      | 20 (13.33)    |
| 2      | Favourable      | 30 (60)              | 32 (64)                 | 32 (64)      | 107 (71.34)   |
| 3      | More favourable | 14 (28)              | 10 (20)                 | 6 (12)       | 23 (15.33)    |
|        | <b>Mean</b>     | 67.84                | 60.36                   | 60.42        | 62.57         |
|        | <b>SD</b>       | 8.97                 | 13.14                   | 7.456        | 10.67         |

**Table 2. Distribution of non-ICT farmers according to their attitude towards ICT based extension services**

N=60

| S. No. | Category        | Frequency | Percentage |
|--------|-----------------|-----------|------------|
| 1      | Less favourable | 12        | 20         |
| 2      | Favourable      | 40        | 66.7       |
| 3      | More favourable | 8         | 13.3       |
|        | Mean            |           | 61.41      |
|        | SD              |           | 8.87       |

**Table 3. Distribution of extension service providers based on attitude towards ICT based extension services**

N=60

| S. No. | Category        | Frequency | Percentage |
|--------|-----------------|-----------|------------|
| 1.     | Less favourable | 9         | 15.00      |
| 2.     | Favourable      | 40        | 66.67      |
| 3.     | More favourable | 11        | 18.33      |
|        | Mean            |           | 97.68      |
|        | SD              |           | 8.05       |

**Table 4. Distribution of project functionaries' orientation towards ICT extension services profession**

N = 15

| S. No. | Category          | Frequency | Percentage |
|--------|-------------------|-----------|------------|
| 1      | Less favourable   | 5         | 33.33      |
| 2      | Favourable        | 6         | 40.00      |
| 3      | Highly favourable | 4         | 26.67      |
|        | Mean              |           | 22.00      |
|        | SD                |           | 3.84       |

### **Orientation of project functionaries towards ICT extension service profession**

Orientation of an individual is directing the interests of himself towards something. In the present context the orientation of functionaries towards ICT extension i.e. using information and communication technologies in agricultural extension services was studied. For this orientation scale was developed. The scale comprised of eight statements, each statement was measured on five point continuum ranging from score 1 to 5. Thus total score ranging from 8 to 40. The frequency distribution of respondents on their orientation towards ICT extension service profession is reported in table 4.

As it can be seen from the data in table majority (40.00%) functionaries had favourable orientation (Meera 2002) followed by less favourable (33.33%) and highly favourable (26.67%) orientation towards ICT extension service profession. This may be due to their lower educational and professional qualifications and less number of trainings received and lower remuneration being paid to them. Through proper trainings, motivation and attractive incentives may inculcate favourable orientation towards ICT extension service profession among the project functionaries.

### **CONCLUSION**

The study showed that majority of farmers had favourable attitude towards ICT based extension services. It implies that immediate effort should be made to overcome the present constraints by establishing village level kiosk in all the regions of country and also making it affordable and easy access among the farmers. Attitude of extension service providers was favourable. Hence all state agricultural universities should incorporate ICT related curricula in agricultural education as early as possible to develop strong human capital to act as interfaces between ICTs and farmers. The apex bodies in agricultural education need to develop full fledged strategies in promoting information access to farmers through ICTs.

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