

## Information and Communication Technology Utilization Pattern and Determining Factors of Knowledge and Skill Gain among Rural Youths—An Analysis

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**Abstract** The study was conducted in Kanya kumari district of Tamil Nadu during 2018 with the objectives of understanding ICT utilization pattern among rural youths engaged in agriculture and factors determining knowledge gain and skill gain among rural youths. About 160 rural youths performing farming have been selected randomly for the study. Majority of the rural youth respondents fall under medium to high level category on their awareness towards ICT tools and services, degree of ICT accessibility and possession of modern electronic gadget. Likewise, majority of the rural youth respondents would like to utilize the ICT services at Panchayat office and government schools. Also, not even half of the respondents would like to pay for ICT services. Educational status, peer influence, previous exposure and acquisition and maintenance of social status were identified as the most positively contributing factors towards the knowledge

gain of the rural youth respondents. Likewise, farming experience, employability and compatibility nature of the new skill were identified as the most positively contributing factors towards the skill gain of the rural youth respondents.

**Keywords** ICT utilization pattern, Positively contributing-factors, Knowledge gain, Skill gain.

### Introduction

The era we living is Information era, the Information and Communication Technology (ICT) have shrunk the world in the hands through several electronic gadgets like smartphones, computer, tablets. Even though our Nation reaches, several height in ICT sector day by day still its reach over the farming community remains at stake. Government of India is implementing various programs and schemes with the objectives to promote capacity building by skill up-gradation and self-employment oriented training programs for youth, entrepreneurs, farmers and women (Yojana 2015). Adegbidi (2012) suggests that ICT in the agriculture sector facilitates knowledge sharing within and among a variety of agriculture networks including researchers, exporters, extension services, traders and farmers. Pratik and Armstrong (2014) reported that ICT tools like mobile applications effectively deliver timely information to different subscribers such as farmers and traders. The information

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delivered includes weather, rainfall, crop information at large, while some applications also help update the market data of commodity prices and facilitate the local buying/selling via hand held devices. These mobile applications helped the farming community at large to get connected, updated, prepared and profitable. He also quouted that the basis of development is strengthening peoples capacity to determine their own goals which shall be possible through the effective usage of ICT tools i.e., instead of motivating the poor to participate in development programs, helping the poor to build capacities that enable them to participate effectively. In particular, the utility of mobiles phones to deliver agricultural information services (referred to as m-services here) to farmers has received much attention. The rapid spread of mobile phones throughout the developing world offers opportunities to reach often remote, dispersed and poorly serviced farmers by overcoming barriers of space and social standing. Rapid technological advances in mobile technologies are predicted to further expand the range and usability of agricultural m-services in the future (Baumüller 2017).

With this prelude, the study was taken up with the objectives of (i) ICT utilization pattern of rural youths engaged in agriculture, (ii) Factors determining knowledge gain among rural youths and (iii) Factors determining skill gain among rural youths.

### Materials and Methods

The study was conducted in Kanya kumari district of Tamil Nadu during 2018. The district was selected purposively whereas, the respondents were selected through random sampling procedures. Kanya kumari district was purposively selected for peculiar reasons such as, district's major livelihood is plantation (Banana, Coconut and Rubber) but also its' decennial rural population growth rate is continuously in decreasing trend, -5.51% in 2001 and -43.21% in 2011 census (Statistical Handbook 2017), this controversial data is worth to examine, with this view this district have been taken up for the study. The rural youths enlisted under Krishi Vigyan Khendra's ARYA (Attracting and Retaining Youth in Agriculture) scheme have been given priority for respondents' selection. About 160 rural youths performing farming have been

selected randomly for the study. The respondents' ICT utilization behavior was studied under five sub-heads namely, awareness on ICT tools and services, possession of modern electronic gadget, degree of ICT accessibility, preferred location of ICT access and willingness to pay for ICT services. The responses on factors determining knowledge and skill gain have been recorded as close-ended questions from the respondents. As only educated rural youths have been involved in the study, the data collection tool used was well - structured questionnaire. The collected data were tabulated and analyzed using statistical tools, percentage analysis and cumulative frequency.

### Results and Discussion

The data collected regarding the ICT utilization pattern was analyzed and presented in Table 1. Table 1 infers that, almost 79.38% of the respondents are aware of the ICT tools and services. Majority (86.25%) of the respondents had medium level of possession of modern electronic gadgets followed

**Table 1.** Distribution of respondents based on ICT utilization pattern. (n = 160).

Sl. No.	Category	Awareness on ICT tools and services		Possession of modern electronic gadget		Degree of ICT accessibility	
		No.	%	No.	%	No.	%
1	High	34	21.25	11	6.88	29	18.13
2	Medium	93	58.13	138	86.24	94	58.75
3	Low	33	20.62	11	6.88	37	23.12

  

Sl. No.	Category	No.	%
1	Panchayat office	40	25.00
2	Government school	40	25.00
3	Local Markets / Bazaar	22	13.80
4	Community hall	23	14.40
5	Contact farmer's home	35	21.90

  

Sl. No.	Category	No.	%
1	Willing to pay	66	41.30
2	Not willing to pay	94	58.70
		Total	160
			100.00

by high (13.12%) level of possession of modern electronic gadgets. Majority of the respondents has low to medium degree (81.87%) of ICT accessibility. Exact half of the rural youth respondents (50.00%) would like to access the ICT services on panchayat office and government school of the villages with the equal response of 25.00% each. While, only 41.30% of the respondents are willing to pay for affording ICT services rest (58.70%) of them are not willing to pay for the services.

The probable reasons for the results obtained may be, awareness on ICT tools and services not only measures the awareness on ICT tools such as mobile phone and computers it also inquires about the ICT services such as Kisan Call Center (KCC) services, e-kiosks. Because of this, even though all the respondents were aware of smart phones, computers and web pages few percentage of the sample falls in the low awareness category.

The modern electronic gadgets includes, mobile handsets, desktop, laptop, accessories such as printer, scanner, webcam, pen drive, projector, voice recorder, digital camera, video camera. It is not a surprise that all the respondents own a mobile phone that too smart phone as it is available in all affordable prices in the market. It could be seen from the findings that nearly two-thirds (93.12%) of the respondents had medium to high level of possession of modern electronic gadgets. As almost all the rural youths are regular users of one of the social media tools such as Facebook, WhatsApp everyone possess the smartphones and because of the Tamil Nadu government's free laptop provision scheme to the higher secondary students almost all the families possess laptops hence, the result. This finding is in line with the findings of Saikanth (2017) who has done research on utilization pattern of ICT projects among the farmers of Telangana state.

The response on degree of ICT accessibility might be due to the reason that, few respondents are not believing the technologies provided in internet without consulting it with the government officials and progressive farmers so naturally their time spent on the agricultural Web Pages, Portals, Agri-related YouTube channels, Mobile Apps, Facebook and Whatsapp groups are comparatively lesser. This

finding is in agreement with the findings of Sankri (2012) who conducted research on utilization pattern of respondents on TNAU Agri-tech portal, quoted that majority (56.67%) of the respondents use the portal occasionally.

The result on preferred location of ICT access might have influenced mainly by the gender factor i.e. almost all the female respondents opted for government school concerning the safety of the place. Whereas, majority of the male respondents opted for Panchayat office building and contact farmer's home mainly because of the presence of resourceful persons which could be helpful in occurrence of any technical issues. This finding agrees with the findings of Naveen Kumar et al. (2017) they found that majority (60.00%) of the farmers are preferring the ICT tools access trainings to be conducted in their own villages itself, that too in the presence of successive farmers or opinion leaders.

Regarding the willingness to pay for ICT services the reason might be, even though every respondent likes the benefit out of ICT services they also believes that, they shall learn all the scientific advices for free in internet by browsing itself. This finding is an contradictory to the findings of Shanthinichandra (2012) who has recorded positive response among the e-Velanmai users for the same.

An attempt was made to assess the determining factors for knowledge and skill gain among the rural youth respondents hence, the respondents were requested to shed their views on a set of 13 determining factors. The pertinent data on these variables were collected and furnished in Table 2 and Table 3.

It could be observed from Table 2 that educational level (70.00%) was emerged as most positively contributing factor for the knowledge gain among rural youth respondents. The reason might be because, education helps the individual to upscale their knowledge to understand the world better. In this modern era, due to digitalization, the world has shrunken into the hands of educated people via several modern electronic gadgets and the education acts as a magic wand to explore the capabilities of the gadgets.

**Table 2.** Factors affecting knowledge gain among the rural youth respondents. (n =160). MPC – Most Positively Contributing, PC – Positively Contributing; NC – Negatively Contributing.

Sl. No.	Factors	MPC		PC		NC	
		No.	%	No.	%	No.	%
1	Revenue generation	72	45.00	66	41.30	22	13.70
2	Peer influence	94	58.80	58	36.20	8	5.00
3	Achievement motivation	54	33.80	84	52.50	22	13.70
4	Educational level	112	70.00	45	28.10	3	1.90
5	Acquisition and maintenance of existing social status	86	53.80	67	41.80	7	4.40
6	Previous exposure	89	55.60	54	33.80	17	10.60
7	Frequency of usage of ICT tools	68	42.50	74	46.30	18	11.20
8	Real time need	48	30.00	81	50.60	31	19.40
9	Usage of ICT tools by village role models	68	42.50	78	48.80	14	8.70
10	Family situation	78	48.70	63	39.40	19	11.90
11	Availability of ICT infrastructure facilities	78	48.70	67	41.90	15	9.40
12	Learning environment	61	38.10	88	55.00	11	6.90
13	Cost involved in learning	53	33.10	80	50.00	27	16.90

Peer influence (58.80%) was considered as the second most positively contributing factor as the maximum time spent by the rural youth respondents was with their peer groups and so mostly, they would like to do what their peers do.

Previous exposure (55.60%) and acquisition and maintenance of existing social status (53.80%) were considered as the third and fourth most positively contributing factor. The possible reason for this may be due to the fact that the rural youth respondents previous exposure towards the particular agricultural technology might have developed a positive attitude towards it, which favors their knowledge gain. Like-

wise, majority of the rural youth respondents have higher aspiration in their life, to become a role model among their peers that might have caused the result.

The cost involved in training was reported as the negatively contributing factor towards the knowledge gain by 16.90% of the respondents. This might be due to the reason that, not all rural youths who are interested in knowledge gain are from economically stable background, and this lack of economic viability hinders the gain of knowledge when trainings are costlier.

Table 3 explains that farming experience (62.50%) was emerged as most positively contrib-

**Table 3.** Factors affecting skill gain among the rural youth respondents. (n = 160) MPC – Most Positively Contributing. PC – Positively Contributing; NC – Negatively Contributing.

Sl. No.	Factors	MPC		PC		NC	
		No.	%	No.	%	No.	%
1	Farming experience	100	62.50	53	33.10	7	4.40
2	Extension participation	59	36.90	90	56.20	11	6.90
3	Easily testable	75	46.90	74	46.20	11	6.90
4	Relative advantage over the existing skills	56	35.00	90	56.30	14	8.70
5	Employability	89	55.60	66	43.30	5	3.10
6	Prone to future improvement	86	53.80	62	38.70	12	7.50
7	Real time problem solving	85	53.10	63	39.40	12	7.50
8	Compatible nature of the new skill	89	55.60	66	41.30	5	3.10
9	Easily teachable to others	83	51.90	54	33.80	23	14.40
10	Previous success benchmark or cases	81	50.60	62	38.80	17	10.60
11	Parental influence	51	31.90	81	50.60	28	17.60
12	Leisure time	56	35.00	81	50.60	23	14.40
13	Affinity towards the skill	66	41.30	84	57.50	10	6.30

uting factor for the skill gain among the rural youth respondents. The probable reason might be that any professional who rely on the same profession for a long period seems to obtain more skills in the profession in order to sustain in it.

The factors, employability and compatible nature of the new skill occupies the second position with the equal (55.60%) responses as the most positively contributing factors toward the skill gain. Any skill that fetches employment to the learners might be learned and adopted willfully. For example, the employable agricultural skills in rural areas, were tractor-driving skills, coconut tree climbing skills. Likewise, if any compatible new skill introduced in the region fetches employment, then the particular skill gain may be more.

The factor prone to future improvement (53.80%) is ranked third as the most positively contributing one. It might be due to the interest of the rural youth respondents in entrepreneurship. Rural youth respondents show interest in learning the skills, which have a good scope in future, and which might help them achieve their aspirations in life.

More than half of the rural youth respondents (56.30%) have expressed that relative advantage over the existing skills may positively contribute towards the skill gain. As the skill need differs time to time the real-time problem solving skills gains more importance than the obsolete skills might have caused the result.

Parental influence factor was reported as the negatively contributing factor (17.60%) towards the skill gain of the rural youth respondents. It might be due to the dominance and influence of parents in the selection of education courses and skills to be pursued by their wards devoid of their personal interest.

## Conclusion

The study shows that majority of the rural youth

respondents possess medium to high level of ICT utilization pattern. Educational status, peer influence, previous exposure and acquisition and maintenance of social status were identified as the most positively contributing factors towards the knowledge gain of the rural youth respondents. Likewise, farming experience, employability and compatibility nature of the new skill were identified as the most positively contributing factors towards the skill gain of the rural youth respondents. Hence, by concentrating on these factors we could boost the knowledge and skill gain among the rural youths.

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