Constraints faced by extension officers of Coimbatore district, Tamil Nadu in using Uzhavan app

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ABSTRACT

Among the recent advancement in ICT and its application in agriculture, mobile apps have the potential to digitalize the world. Mobile applications which target the need of agricultural sector and its stakeholders such as farmers, input dealers, cooperation etc are known as mobile agricultural applications. A new mobile application named Uzhavan app was launched by Tamil Nadu government for disseminating agriculture related information to farmers. This paper deals with the constraints faced by the agricultural extension officers in using Uzhavan app. A well-structured interview schedule was used for collecting data. Uzhavan app was being used by cent per cent of the extension officers through smart phone. Extension officers frequently used market price and seed stock services of Uzhavan app for giving advisory services to farmers. The major constraints perceived by the extension officers while using Uzhavan app was that the information was not updated properly.

Keywords: Constraints; extension officers; Uzhavan app; farmers; information

INTRODUCTION

In the past couple of years tremendous growth in mobile users was witnessed all over the world due to the entry of smart phone in the market at affordable prices. In the today's fast-paced world phone is not just for calling; it is for connecting with different social networks. The growth of mobile phone market has generated a demand for huge mobile applications. Mobile applications are software programmes developed for mobile devices such as smart phones and tablets (https://www.lifewire.com/what-is-a-mobile-application-2373354).

The high cost of delivering information through face to face communications paved the way for use of mobile applications for delivering services to farmers.

The mobile app is an extension of the web-based solution provided to the farmers. Initially mobile phone services to farmers were given through text messages and helplines. Now it has been improved to mobile apps. Mobile applications which target the need of agricultural sector and its stakeholders such as farmers, input dealers, cooperation etc are known as mobile agricultural applications (Costopoulou et al 2016).

Tamil Nadu government has come out with a mobile application named Uzhavan which includes fifteen different services. It is bilingual app which presents information in English and Tamil languages. This move was part of the government's effort to take to the next level use of technology to aid farmers in their profession. Uzhavan app has real details on subsidies available for schemes under various categories including seeds, machinery, solar pump set, shade net, polyhouse, pack house, hi-tech nursery, low cost onion storage, mobile vendor cart, mushroom cultivation etc. It also has details on crop insurance, premium amount, stock position of fertilizers, seed stock, custom hiring centers for primary machines in each district, market prices for various crops in regulated markets, weather forecasts for the next four days in each district etc.

This study was mainly concerned with studying the profile characteristics of the extension officers and finding out the constraints faced by them in using Uzhavan app in order to make an improvement.

METHODOLOGY

The study was purposely conducted in Coimbatore district of Tamil Nadu. Coimbatore district consists of 12 blocks. Out of 293 extension officers in Coimbatore district 30 respondents were selected randomly. Ex-post facto research design was used to conduct study. Inferences about relations among variables were made without direct intervention from concomitant variations of independent and dependent variables (Kerlinger 1986). A well-structured interview schedule was prepared to collect the data.

RESULTS and DISCUSSION

Profile characteristics of the extension officers
Profiling of respondents was carried out to know their characteristics (Table 1). In total eight profile variables were considered.

It was found that majority (73.34%) of the respondents belonged to middle age group (29-42 years). Majority (60.00%) of the respondents was male and only 40 per cent were female. Majority (86.67%) was having an experience of 3-14 years as extension agent; majority (76.67%) had medium (4-8 years) experience in using smart phone; all were having just six months experience in using Uzhavan app; all were haing mobile/smart phones and internet service. However 83.33 and 76.67 per cent were also having tablets and computers. All of them used android phones and majority (80.00%) was having dual sim cards.

Frequency of using Uzhavan app and its components by the extension officers
Uzhavan app comprised 15 different services like subsidy scheme, crop insurance, fertilizer stock etc. The information on degree of utilization of various components of the app as perceived by extension officers was collected and is presented in Table 2.

More than half (53.33%) of the respondents were frequently using Uzhavan app. Most of the respondents were most frequently using it for knowing seed stock (43.33%) and market price (43.33%) followed by custom hiring center (36.67%), weather forecast (30.00%) and fertilizer stock (26.67%) for

giving advisory services to farmers. Majority (86.67%) of the respondents not at all used horticultural officer's visit service because that service was exclusively applicable for farmers only.

Physical features of Uzhavan app
Uzhavan app had different services and features. For understanding quality of the Uzhavan app its physical features were studied. The physical features included background colour of the app, content presented in the app and illustration used in the app.

The physical features of app as perceived by extension officers are presented in Table 3. One of the major problems perceived by all the respondents was that the app needed internet connection for functioning followed by network problem while travelling and roaming in rural areas (83.33%). Mostly (43.33%) partially agreed that there was use of pleasant colours followed by user-friendly (40.00%) and adequate contents provided (36.67%). Majority (73.33%) disagreed with the problem of information provided according to local situation.

Perception of extension officers towards Uzhavan app
Extension officers' perception on the Uzhavan app was gathered in terms of its information services offered to its users such as need-based, location specific, timely, appropriate etc. The responses were rated against either agree or disagree. The results are presented in Table 4.

Majority agreed that the information provided through app was location specific (80.00%) followed by the information obtained through app was as per the users' needs (76.67%), mode of presentation of information in the app was appropriate (70.00%) and it was suitable for providing latest information (60.00%). However majority of the respondents (70.00%) felt that timely information was not provided through the app. Hence efforts were needed to make the app effective for rendering the latest technological advice to the farmers in time.

Constrains faced by extension officers in using Uzhavan app
The constraints faced by the extension officers in using the Uzhavan app are given in Table 5.

Table 1. Profile characteristics of the extension officers

Characteristic	Category	Respondents (n= 30)	
		Number	%
Age (years)	Young (<29)	4	13.33
	Middle (29-42)	22	73.34
	Old (>42)	4	13.33
Gender	Male	18	60.00
	Female	12	40.00
Experience as an extension agent (years)	Low (<3)	1	3.33
	Medium (3-14)	26	86.67
	High (>14)	3	10.00
Experience in using smart phone (years)	Low (<4)	3	10.00
	Medium (4-8)	23	76.67
	High (>8)	4	13.33
Experience in using Uzhavan app (months)	6	30	100.00
Availability of ICT tools among the respondents	Mobile phone	30	100.00
	Smart phone	30	100.00
	Tablet	25	83.33
	Computer	23	76.67
	Internet	30	100.00
Type of smart phone used by respondents	Android	30	100.00
	Windows	0	Nil
	Others	0	Nil
Number of sim cards	Single sim	6	20.00
	Dual sim	24	80.00

Table 2. Frequency of using Uzhavan app and its components by the respondents

Component	Respondents (n= 30)							
	Most frequently used		Frequently used		Least used		Not at all used	
	Number	%	Number	%	Number	%	Number	%
App as a whole	6	20.00	16	53.33	8	26.67	0	0.00
Subsidy scheme	6	20.00	17	56.67	7	23.33	0	0.00
Crop insurance	1	3.33	4	13.33	17	56.67	8	26.67
Benefit registration	2	6.67	4	13.33	16	53.33	8	26.67
Fertilizer stock	8	26.67	7	23.33	15	50.00	0	0.00
Seed stock	13	43.33	12	40.00	5	16.67	0	0.00
Custom hiring center	11	36.67	2	6.67	9	30.00	8	26.67
Market price	13	43.33	11	36.67	6	20.00	0	0.00
Weather forecast	9	30.00	7	23.33	6	20.00	8	26.67
Assistant agriculture officer's visit	0	0.00	0	0.00	7	23.33	23	76.67
Horticultural officer's visit	0	0.00	0	0.00	4	13.33	26	86.67
Reservoir	0	0.00	0	0.00	2	6.67	28	93.33
Agri-news	4	13.33	5	16.67	6	20.00	15	50.00
Feedback	0	0.00	0	0.00	2	6.67	28	93.33

Table 3. Physical features of Uzhavan app as perceived by the extension officers

Feature	Respondents (n= 30)					
	Strongly agree		Partially agree		Disagree	
	Number	%	Number	%	Number	%
Use of pleasant colours	7	23.33	13	43.33	10	33.34
Use of clear illustrations	13	43.33	8	26.67	9	30.00
Clear contents	16	53.33	8	26.67	6	20.00
Information provided as per location	2	6.67	6	20.00	22	73.33
Adequate contents provided	12	40.00	11	36.67	7	23.33
Network connectivity must for usage	30	100.00	0	0.00	0	0.00
Network problem faced while travelling and roaming	25	83.33	2	6.67	3	10.00
User-friendly	3	10.00	12	40.00	15	50.00

Table 4. Perception of extension officers towards Uzhavan app

Statement about Uzhavan app	Respondents (n= 30)			
	Agree		Disagree	
	Number	%	Number	%
Suitable for providing latest information	18	60.00	12	40.00
Suitable for providing timely information	9	30.00	21	70.00
The information obtained through app is as per the user's needs	23	76.67	7	23.33
Mode of presentation of information in the app is appropriate	21	70.00	9	30.00
The information provided through app is location specific	24	80.00	6	20.00

Table 5. Constraints faced by extension officers in using Uzhavan app

Constraint	Respondents (n= 30)	
	Number	%
App works only in the presence of network connectivity	27	90.00
App is not easy to use	24	80.00
Updating work is not properly carried out in the app	23	76.67
Difficult in offering technology advisories	20	60.00

The most important constraint faced by the extension officers in using Uzhavan app was that it worked only in the presence of network connectivity (90.00%).

Eighty per cent reported that it was not easy to use and 76.67 and 60.00 per cent were of the view that updating work was not properly carried out in the app and there was difficulty in offering technology advisories respectively through it.

CONCLUSION

Mobile application has become an important tool for technology dissemination. Tamil Nadu government had taken an important step for bringing ICT tools for technology transfer. The information disseminated through Uzhavan app was valuable. All the information was based on the need of the farmers. But there were some constraints like network problem, accessibility present etc in Uzhavan app.

Timely update was required for services like market price, fertilizer stock, seed stock, officer visit etc. A separate multidisciplinary team is required for monitoring and updating the services. App should be made available in offline mode. If the advisory services were provided through voice messages and text messages, farmers who were not having android phones would also be benefited. The services regarding information on subsidies should also be provided through mobile phone.

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