Extent of Utilization of Uhavan App in Madurai District of Tamil Nadu

G. Tamilselvi, G. Gayathri, V. Sandhya, V. Sakthivel and T. Balakrishnan

C A R A S

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G. Tamilselvi*[1], G. Gayathri[2], V. Sandhya[3], V. Sakthivel[4] and T. Balakrishnan[5]

A B S T R A C T

The present study was taken up in ten selected villages in Alanganallur block of Madurai district of Tamil Nadu. A fixed sample size of 120 respondents was selected by proportionate random sampling technique. The data were collected from the respondents with the help of a well-structured and pre-tested interview schedule. Majority of respondents were found to have medium extent of utilization of Uzhavan app and they were frequently using the services provided by Uzhavan app. The extent of utilization of various services under Uhavan app viz., Information on subsidy schemes, Crop insurance, Fertilizer stock, Seed stock production, Market prices, Farm guide, Agricultural news and Pest and Disease monitoring were frequently used by the farmers in Uzhavan app. The services rarely used by the users were Benefit registration, Custom hiring centers, Weather forecast, Visit of AAO/AHO, Information on organic products, Information on FPO products, Information on reservoir levels and feedback. The services which never used by majority of the farmers were Benefit registration, Weather forecast, Information on reservoir levels and Feedback was studied among the beneficiaries.

Key words: Uzhavan app, Extent of utilization, Weather forecast, Farm guide, Crop insurance

Information and communication are always necessary in agriculture. Since people have started growing crops, raising livestock, and catching the fish, they have hunted information from one another. ICT can be construed broadly as "using electronic means for processing and disseminating information and thereby facilitating communication quickly and easily". Indian users comprise about 30 per cent of the total volume of the global feature phone market making it the second largest in the specified field. In 2015, India had 720 million mobile phone users. Out of which, 320 million were rural mobile phone users. This estimate also included 50 million smartphone users with access to internet. According to 'The Rising Connected Consumer in Rural India' a study by the Boston Consulting Group, this share of rural India will jump to 48 per cent by 2020. Steps taken by the Indian Government recently may make this happen sooner than predicted. Digital India launched in 2015 by Indian Prime Minister Narendra Modi aims towards the promotion of digital literacy and creation of digital infrastructure for empowering rural communities. Smart mobile phones, radio and television were the most important tools of communication which could be accessed by farmers for agricultural related information and knowledge [1]. The level

of availability and accessibility of ICTs was highest for smart mobile phones followed by television and radio respectively. Smart mobile phones were also regarded as the most frequently used ICT tool as compared to other ICTs [2]. More than three-fifth of the respondents (61.68 per cent) of the respondents had medium level of credibility of mobile agro-advisory service, followed by 19.16 per cent of the respondents had high and low level of credibility of mobile agro-advisory service [3]. The mobile telephony has been most recent and widely accepted mode of delivering information not only in India but throughout the world. Mobile phones are widely recognized as a potentially transformative technology platform for developing nations. The applications have been developed to help farmers for acquiring relevant information on agricultural practices, weather, quality input and proper information about agriculture and allied sectors etc. The uzhavan app is developed in bilingual languages of Tamil and English especially for Tamil Nadu farmers. This app was launched by Former Tamil Nadu Chief Minister Edapaddi K. Palaniswami. Currently, this app provides nearly eighteen services to farmers such as Farm subsidy and schemes, Benefit registration, Crop insurance, Fertilizer and seed stock position, Custom hiring center, market price, weather forecast, AO/HO Visit, Farm guide, pest/disease monitoring, ATMA training and demonstration and uzhavan e-market [4]. As the app was launched recently, it was felt necessary to study about its extent of utilization so as to redesign the app more suitable to the needs of the farmers. Hence, the present study entitled "The study on uzhavan app in Madurai district of Tamil Nadu" was undertaken.

* **G. Tamilselvi**
✉ grgtg255@gmail.com

1-5 Department of Agricultural Extension, Faculty of Agriculture, Annamalai University, Annamalai Nagar - 608 002, Tamil Nadu, India

MATERIALS AND METHODS

The extent of utilization of Uzhavan app was measured by using the scale adopted by Yuvraj (2019) with suitable modification. In order to study the extent of utilization, three components were identified. The selected components were frequency of utilization, utility perception and satisfaction. The utility perception was measured under five dimensions namely adequacy, relevancy, timeliness, completeness, and understandability. The Extent of utility index was also worked out by dividing the actual extent of utility score obtained by the respondents by the maximum extent of utility score and then multiplied by 100. The extent of utility index was worked out by using the following formula:

Calculation of extent of utility index (EUI)

The extent of utilization of uzhavan app by the respondents was calculated as extent of utility index. The scores obtained by the respondents under the three major components were summed up to arrive at the actual extent of utility score of an individual. This was divided by the maximum extent of utility score. This was calculated by using the following formula and referred as extent of utility index.

$$EUI = \frac{\text{Actual extent of utility score obtained by respondent}}{\text{Maximum extent of utility score}} \times 100$$

Based on the index values, the respondents were classified in to three categories viz., low, medium and high. The statistical tools used in the study were percentage analysis and cumulative frequency method. The data were coded, tabulated and interpreted.

RESULTS AND DISCUSSION

Extent of utilization of Uhavan App

Results on distribution of respondents according to their extent of utilization of uzhavan app are presented in (Table 1). The majority of respondents (66.67 per cent) had used the app to medium extent, followed by high extent of utilization (19.16 per cent) and low extent (14.17 per cent). Majority of the respondents perceived that the information provided in the uzhavan app as adequate, relevant, timely, complete and understandable and they were highly satisfied with the information provided through uzhavan app. This in turn would have resulted in medium to high level of utilization among the respondents [5].

Table 1 Distribution of respondents according to their extent of utilization of uzhavan app (n = 120)

Extent of utilization	Frequency	Per cent
Low	17	14.17
Medium	80	66.67
High	23	19.16
Total	120	100.00

Frequency of utilization of Uzhavan app by the respondents

The frequency of utilizing the Uzhavan app and its various services by the respondents was studied and the results are discussed.

Overall frequency of utilization of Uzhavan app by the respondents

Results on distribution of respondents according to their overall frequency of utilization of uzhavan app are presented in (Table 2). It could be noticed from the (Table 2) that two-fifths (46.67 per cent) of the respondents were using the services provided by uzhavan app more frequently followed by 35.00 per cent of the respondents who were using frequently. One-fifth of the respondents (18.33 per cent) were less frequently using the uzhavan app services. None of the respondents was found under least frequent category. Hence it may be concluded that all the respondents are using the services provided by uzhavan app. This finding derives support from the findings of Kavipriya [4] who also reported that all the beneficiaries of Uzhavan app in Cuddalore district were found utilising all the services.

Table 2 Distribution of respondents according to their overall frequency of utilization of uzhavan app (n = 120)

Category	Number of respondents	Per cent
More frequently	56	46.67
Frequently	42	35.00
Less Frequently	22	18.33
Least Frequently	-	-
Total	120	100.00

Extent of utilization of various services under Uzhavan app

There are eighteen services provided under Uzhavan app. The respondents were asked to mention their frequency of utilizing these services in Uzhavan app and the results are presented in (Table 3). The data depicted in (Table 3) reveals that all the eighteen services were utilized by the farmers either frequently, sometimes or rarely. The services used by the farmers frequently to sometimes were Information on subsidy schemes (41.67 per cent), Crop insurance (33.33 per cent), Fertilizer stock (38.33 per cent), Seed stock production (36.67 per cent), Market prices (38.33 per cent), Farm guide (37.50 per cent), Agricultural news (42.50 per cent) and Pest and Disease monitoring (34.16 per cent). The services rarely used by the users were Benefit registration (53.33 per cent)**,** Custom hiring centers (35.00 per cent), Weather forecast (39.17 per cent), Visit of AAO/AHO (42.50 per cent), Information on organic products (38.33 per cent), Information on FPO products (43.33 per cent), Information on reservoir levels (36.67 per cent) and feedback (33.33 per cent). The services which never used by majority of the farmers were Benefit registration (41.67 per cent), Weather forecast (50.00 per cent), Information on reservoir levels (52.50 per cent) Feedback (42.50 per cent), ATMA Training and Demonstration (41.67 per cent) and e-Market (53.33 per cent).

Service wise extent of utilization of uzhavan app
Information on subsidy schemes

It could be seen from the (Table 3) that around forty per cent (41.67 per cent) of the respondents were using the app frequently to get information on subsidy schemes followed by one-fourth (25.00 per cent) of the respondents who were sometimes using the app. It was rarely used by 16.67 per cent and never used by 16.67 per cent of the respondents. Hence, it could be concluded that majority of the respondents (84.17 per cent) were using the app to get information on subsidy schemes. As the subsidy schemes implemented by the State Government are highly useful to the farmers to undertake their agricultural operations, they would have been more eager to know about various subsidy schemes available to them [6].

Benefit registration

This service was rarely utilized by majority (58.33 per cent) of the respondents and never used by 41.67 per cent of the respondents. This service is meant for the users to get

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themselves registered so as to get priority in availing the benefits of various schemes related to agriculture. As it is one-time task, the respondents need not go for this option repeatedly [7].

Crop insurance

It could be seen from the table that a little more than one-third (30.83 per cent) of the respondents were using the app sometimes to get information on crop insurance followed by 33.33 per cent of the respondents who were frequently using the app. It was rarely used by 17.50 per cent and never used by 18.33 per cent of the respondents to get this service. Hence, it could be concluded that majority of the respondents (83.33 per cent) were using the app to get information on crop insurance. This service is also an essential service needed for the farmers so as to face the losses of crop failure due to disasters like cyclone, flood etc., so, the farmers need information on insurance details like amount of premium, period of insurance, places of insurance, whom they have to contact etc., This would have enabled the farmers to use the app to get information.

Fertilizer stock

A little more than one-third (38.33 per cent) of the respondents were using the app frequently to get information on fertilizer stock followed by 29.16 per cent of the respondents

who were using the app sometimes. It was rarely used by one-fifth (20.83 per cent) and never used by 11.67 per cent of the respondents. Hence, it could be concluded that majority of the respondents (87.50 per cent) were using the app to get information on fertilizer stock. Farmers often need information on fertilizer availability to apply in their fields during the various stages of crop growth. As the quality fertilizers are not available with nominal cost in the shops of local input dealers, they desire to get quality inputs with nominal cost. This would have necessitated them to use the app for availing this service.

Seed stock production

A little more than one-third (32.50 per cent) of the respondents were using the app sometimes to get information on seed stock production followed by 36.67 per cent of the respondents who were using the app frequently. It was rarely used by one-fourth (22.50 per cent) and never used by 8.33 per cent of the respondents. Hence, it could be concluded that majority of the respondents (88.33 per cent) were using the app to get information on seed stock production. Farmers need good quality seed material so as to get healthy crop and to get good returns. As the uzhavan app includes this service which provide information on availability of seed material, cost, quantity, name and contact details of the seed stock producers etc., the farmers were frequently using this service through the app.

Table 3 Frequency of utilization of various services under Uzhavan app by the respondents (n=120)

Services	Frequently		Sometimes		Rarely		Never	
	No	Percent	No	Percent	No	Percent	No	Percent
Information on subsidy schemes	50	41.67	30	25.00	20	16.67	20	16.67
Benefit registration	0	0.0	0	0.0	70	58.33	50	41.67
Crop insurance	37	30.83	40	33.33	21	17.5	22	18.33
Fertilizer stock	46	38.33	35	29.16	25	20.83	14	11.67
Seed stock production	39	32.5	44	36.67	27	22.5	10	8.33
Custom hiring centers	26	21.67	27	22.5	42	35.00	25	20.83
Market prices	46	38.33	31	25.83	23	19.16	20	16.67
Weather forecast	0	0.0	10	8.33	50	41.67	60	50
Visit of AAO/AHO	26	21.67	12	10	50	41.67	32	26.67
Farm guide	45	37.5	29	24.16	34	28.33	12	10.00
Information on organic products	32	26.67	22	18.33	42	35	24	20
Information on FPO products	23	19.16	26	21.67	49	40.83	22	18.33
Information on reservoir levels	0	0.0	10	8.33	47	39.16	63	52.5
Agricultural news	51	42.5	30	25	33	27.5	6	5
Feedback	28	23.33	11	9.16	30	25	51	42.5
Pest and disease monitoring	30	25	41	34.16	26	21.67	23	19.16
ATMA training and demonstration	0	0	8	6.67	62	51.67	50	41.67
e- Market	0	0	0	0	56	46.66	64	53.33

Custom hiring center

This service was used frequently by 21.67 per cent and sometimes by 22.50 per cent of the respondents. A little more than one-third (35.00 per cent) of the respondents were rarely using this service and one-fifth (20.83 per cent) of them never used it. The farmers can get information on hiring centers regarding the source of availability of tractors and other agricultural implements, hiring charges, contact details etc., under this service. As these services are rarely needed for undertaking agricultural operations, they might have been rarely used it.

Market prices

This service was used frequently by 38.33 per cent of the respondents, sometimes by 25.83 per cent, rarely by 19.16 per

cent and never used by 16.67 per cent of the respondents. Marketing support for farmers is the most essential service provided in the Uzhavan app. Under this service, the details like day today market prices for the agricultural commodities, information on market committees, regulated markets, place of marketing etc., are given. As this information was needed by all the farmers to get fair prices for their commodities, majority of them might have used this service [8].

Weather forecast

The information on weather forecast was never referred by half the proportion of the respondents (50.00 per cent) and rarely by forty per cent (41.67 per cent) of the respondents. This was sometimes referred by one-tenth (8.33 per cent) of the users and none of them used this service frequently. Farmers used to

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take most of the farming decisions based on their experiences with weather factors like temperature, rainfall, humidity etc., Moreover, they have got this information from TV and hence they don't depend this service for getting weather information.

Visit of AAO/AHO

A little more than two-fifths (41.67 per cent) of the respondents used this service rarely and one-fourth (26.67 per cent) of them never used it. This information was used sometimes by 21.67 per cent and frequently by 10.00 per cent of the respondents. The farmers revealed that as the details given under this service like date and venue of AAO/AHO are not updated, they were not frequently using this service.

Farm guide

The information provided in the farm guide was referred sometimes by 37.50 per cent of the respondents and frequently by 24.16 per cent. Around thirty per cent (28.33 per cent) of them were using rarely and 10.00 per cent were never using this service. This guide imparts information related to cultivational aspects of crops; the farmers might have used this to get information [9].

Information on organic products

The information on organic products was used rarely by around forty per cent of the respondents followed by 26.67 and 18.33 per cent who were using this service sometimes and frequently. This was never used by 20.00 per cent of the respondents. As most of the farmers were not interested to know about organic products, they were using this service rarely.

Information on FPO products

A little more than two-fifths (40.83 per cent) of the respondents were rarely using this service followed by 19.16 per cent and 21.67 per cent of the respondents who were using this service sometimes and frequently respectively. This was not used by 18.33 per cent of the respondents. As most of them were unaware of FPO products, they would have not used this service.

Information on reservoir levels

Majority of the farmers (52.50 per cent) were found to never use this service followed by 39.16 per cent who were rarely using this information and only 8.33 per cent were using it sometimes. None of the respondents had frequently used this service. As the farmers get this information from TV, they might have not used this service frequently [10].

Agricultural news

Agricultural news was used frequently by 42.50 per cent, sometimes by 25.00 per cent and rarely by 27.50 per cent of the respondents. Only a meagre proportion (5.00 per cent) were never using this service. Hence, it could be concluded that majority (95.83 per cent) of the farmers were using this service for getting news on agriculture. As the farmers require up to date information related to modern technologies and crop related information, most of them would have used this service.

Feedback

Most of the respondents were not providing feedback on the services provided under uzhavan app and one-third were rarely using it. Feedback was frequently given only by 23.33 per cent and sometimes by 9.16 per cent of the respondents. The respondents revealed that they were not getting immediate rely for their queries in the feedback and hence they were not opting this service.

Pest and disease monitoring

The information on Pest and Disease monitoring was sometimes used by 34.16 per cent of the users followed by 25.00 per cent who were using it frequently. An equal proportion of the respondents who were rarely (21.67 per cent) and never (19.16 per cent) using this service. The information on Pest and Disease monitoring is most needed aspect required by all the farmers to get remedial measures for pest and diseases. However, the farmers revealed that they find difficulty in uploading the precise images due to various reasons and hence they could not use this service frequently [11].

ATMA training and demonstration

ATMA training and demonstration was rarely used by half the proportion (51.67 per cent) of the respondents followed 41.67 per cent who were never used this service. This was used sometimes by 6.67 per cent of the respondents. As this service was recently added, the users are not familiar with the use of this service [12].

e- Market

Majority of the farmers (53.33 per cent) were never using this service followed by 46.67 per cent who were rarely using this service. None of them were using it either frequently or sometimes. This might be due to the unfamiliarity of the users with this e- market service as it was newly introduced [13].

Satisfaction of beneficiary farmers about the services rendered through Uzhavan app

Results on distribution of respondents according to their satisfaction on information provided through uzhavan app are presented in (Table 4). It could be noticed from the (Table 4) that majority (62.50 per cent) of the respondents expressed that they were highly satisfied on information provided by uzhavan app followed by 37.50 per cent of the respondents who expressed that they were satisfied on provided information. None of the respondents was dissatisfied with the information provided in uzhavan app. It could be concluded that all the respondents were highly satisfied on information provided in uzhavan app. As majority of the respondents perceived that the information provided in the uzhavan app as adequate, relevant, timely, complete and understandable, they might have been satisfied with the information [14-15].

Table 4 Distribution of respondents according to their satisfaction on information provided through uzhavan app (n = 120)

Category	Number of respondents	Per cent
Highly satisfied	75	62.50
Satisfied	45	37.50
Dissatisfied	0	0.00
Total	120	100.00

CONCLUSION

Majority of the farmers were found to utilize the information on services viz., Information on subsidy schemes, Crop insurance, Fertilizer stock, Seed stock production, Market prices, Farm guide, Agricultural news and Pest and Disease monitoring. The officials concerned may arrange to provide updated information under these services so that the farmers would sustain interest in using these services and inturn would be benefitted. The services namely benefit registration, custom hiring centers, weather forecast, Visit of AAO/AHO, Information on organic products, Information on FPO products, Information on reservoir levels, feedback, ATMA training and

demonstration and e-market were rarely used by the farmers. Hence the farmers may be encouraged to use these services better by insisting the importance of these services and equipped them with additional information. The services which never used by majority of the farmers were Benefit registration, Weather forecast, Information on reservoir levels and Feedback. Hence these services may be redesigned in new forms with suitable modification so as to persuade the farmers to use the services. It is also suggested that the frequent feedback on uzhavan app from the farmers to be obtained so as to fine tune the app with necessary changes and make it suitable to the information needs of the farmers.

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