



Benefits and Constraints of Mobile Phone Use as an ICT Tool by Dairy Entrepreneurs

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Received: 20 Sept., 2017

Revised: 11 Dec., 2017

Accepted: 13 Dec., 2017

ABSTRACT

The present study was conducted in Kolhapur district of Maharashtra to identify and prioritize the benefits and constraints of mobile phone use as an ICT tool by dairy entrepreneurs. For this study, 120 dairy entrepreneurs were selected from six villages of three blocks namely Karveer, Kagal, Hath-kanangle who had at least two milch animal and also having 3-4 years of dairy experience at the time of investigation. The data was analysed with the help of Garret Ranking Technique. The study revealed that “use of mobile phone leads to easy access to veterinary expert” was the most important benefit followed by “mobile phone reduces time and distance barrier” as a second most important factor that determine the high use of android and non-android mobile phone or use of ICT by dairy entrepreneurs’. The reason for high use of mobile phone by dairy entrepreneurs was timely reliable information, easy access to marketing information, easy contact with customers, promote interpersonal relationship, update knowledge, and increase dairy efficiency. The result of study revealed that “high cost of mobile phone and internet services” was the most important perceived constraint followed by “low network connectivity as second most important factor that determine the low use of mobile phone or low use of ICT by dairy entrepreneurs. The reason for low use of mobile phone by dairy entrepreneurs was language barrier, lack of knowledge and confidence, unavailability and shortage electricity, complex technology.

Keywords: Information and communication technology, mobile phone, benefits, constraints, dairy entrepreneurs, garret ranking technique

The role of Information and Communication (ICTs) as an instrument for progress and development has been widely acknowledged in this ‘Global Information age’, and it has been observed that people with all walks of life are being impacted by the ITC sector directly or indirectly. Among other Information and Communication (ICTs), mobile telephony has emerged as the technology of choice of the majority of the urban and even the rural masses (Ansari and Pandey, 2013). In India, dairying at micro level provides regular work, steady income and keep the rural population employed throughout the year. However, to meet the emerging demand for livestock based products, both in domestic and global markets, information has been envisaged as a vital input in ensuring profitable and sustainable livestock farming. Information and Communication Technology (ICT) is one of the most

effective means of information dissemination. Despite tremendous growth in telecommunication network, rural India is yet to witness a robust and seamless voice and data connectivity. ICT can play an important role in linking knowledge seekers to knowledge sources. However, in spite of the significant potential of modern ICT tools in bridging the information gap, there exist several benefits and constraints in their effective utilisation by the farming community (Singh *et al.*, 2015). Keeping this in view, a study was conducted to document such bottlenecks in use of mobile phone penetration so as to facilitate effective policy formulation towards maximum possible uptake of ICT technologies by the farming community with the objective to identify and prioritize the benefits and constraints in use of mobile phone by dairy entrepreneurs.



MATERIALS AND METHODS

The research was undertaken in purposively selected Kolhapur district of Maharashtra during 2016-2017. Out of twelve blocks, three blocks were selected randomly and two villages from each block were selected to draw a sample of 120 dairy entrepreneurs who had at least two milch animal and were have 3 – 4 years of dairy experience. The data were collected personally with the help of pre-tested structured interview schedule and analysed with the help of Garret ranking technique. The data included information about opinion about the benefits and constraints of mobile phone use. The respondents were asked to rank each of the factors relevant to them according to the degree of importance. The benefits and constraint was done by means of Garret Ranking Technique.

The formula for percent position as suggested by Garret (1981) is:

$$\text{Present position} = \frac{100(R - 0.5)}{N}$$

Where R is the rank of the individual item in the series, N is the number of individual items raked.

To obtained the final order of merit, the score for all the respondents for each of the benefits and constraints were summated and the mean value was calculated. In findings out the mean values, the sum of the scores for each item was divided by its frequency of response.

RESULTS AND DISCUSSION

Table 1, shows the benefits of the use of mobile phone by dairy entrepreneurs as an ICT tool. 'Easy access to veterinary expert or any expert advice as per convenience' was ranked as first with a mean score of 93.33 because it helps them to get information regarding breeding, feeding and health care of animals respectively. With mean score 90.20 and 88.40 dairy entrepreneurs ranked 'Use of mobile phone reduces time and distance barrier' as the second benefit and 'Easy handling and use of mobile phone' as the third major benefit respectively because it saves time as well as money and energy of the dairy entrepreneurs.

With mean score of 88.31 per cent 'Use of mobile phone leads to timely access to reliable source of information' as fourth major benefit, while 'Easy access to market and

marketing information for dairy activities' was ranked as fifth major benefit with mean score of 84.37, followed by 'Updating knowledge of dairy entrepreneurs regarding new and emerging concept / technologies' in dairy sector with the mean score of 84.34 as sixth benefit of mobile phone use.

Table 1: Benefits of mobile phone use as an ICT tool by the dairy entrepreneur's

Sl. No.	Benefits	Frequency (n=120)	
		Mean score	Rank
1	Easy access to veterinary expert or any expert advice as for convenience	93.33	I
2	Use of mobile phones reduces time and distance barrier	90.20	II
3	Mobile phone easy to use and handle	88.40	III
4	Access to timely and reliable source of information for dairy entrepreneurs	88.31	IV
5	Easy access to market and marketing information for dairy activities.	84.37	V
6	Update knowledge of dairy entrepreneur regarding new and emerging concept/ technologies in dairy sector.	84.34	VI
7	Easy contact with customers/ dairy suppliers.	83.37	VII
8	Promote better interpersonal relationship and strong social cohesion.	80.15	VIII
9	Allows more contact amongst dairy entrepreneurs.	80.12	IX
10	Increase efficiency of dairy activities.	79.37	X

'Easy contact with customers / dairy suppliers' was the seventh benefit with mean score of 83.37 per cent while with the mean score of 80.15 per cent reported that 'Use of mobile phone promoted better interpersonal relationship and strong social cohesion' as eighth major benefit of mobile phone use.

'Use of mobile phone allows more contact amongst dairy entrepreneurs' was the ninth benefit with mean score of 80.12 while 'Mobile phone increases efficiency of dairy activities' was the tenth benefit with mean score of 79.37. These results are in line with the findings of Sife *et al.* (2010) and Rathod *et al.* (2016).

A cursory look at Table 2 depicts that constraint faced by dairy entrepreneurs regarding use of mobile phone in study area. Dairy entrepreneurs perceived 'High cost of mobile phone and internet services' as the first main constraint with 91.18 mean score. With mean score 89.41 dairy entrepreneurs revealed that 'Poor or low network connectivity' as second major constraint while concern of security issues during use of mobile phone (fraud, hacking, virus etc.) as third major constraint with mean score of 87.28. It leads to less number of smart phone users as well as internet users and have negative impact for spreading Information and Communication Technology (ICT) via Mobile phone.

Table 2: Constraints of Mobile Phone Use as An ICT Tool by Dairy Entrepreneurs

Sl. No.	Constraints	Respondents (n=120)	
		Mean Score	Rank
1	High cost of mobile phone and internet services.	91.18	I
2	Poor/low network connectivity.	89.41	II
3	Security concern are the main barriers (fraud/hacking/virus)	87.28	III
4	Unavailability of relevant contact in local language	86.15	IV
5	Lack of knowledge and confidence regarding use of various mobile applications.	85.30	V
6	Unavailability of electricity.	85.21	VI
7	Shortage of electricity.	85.14	VII
8	Illiteracy or lack of skill/confidence by dairy entrepreneurs.	82.17	VIII
9	Complex technology to use.	81.95	IX
10	Use of mobile phone leads to wastage of time.	78.49	X

Dairy entrepreneurs perceived that 'Unavailability of relevant information in local language' as fourth major constraint with mean score 86.16, while 'Lack of knowledge as well as confidence' regarding use of various mobile applications was ranked as fifth constraint reported by dairy entrepreneurs with mean score of 85.30 followed by 'Unavailability of electricity and shortage of electricity' with mean score of 85.21 and 85.14 as sixth and seventh constraint respectively. This constricts

provoke the less adoption and less access to mobile phone for new technologies by dairy entrepreneurs.

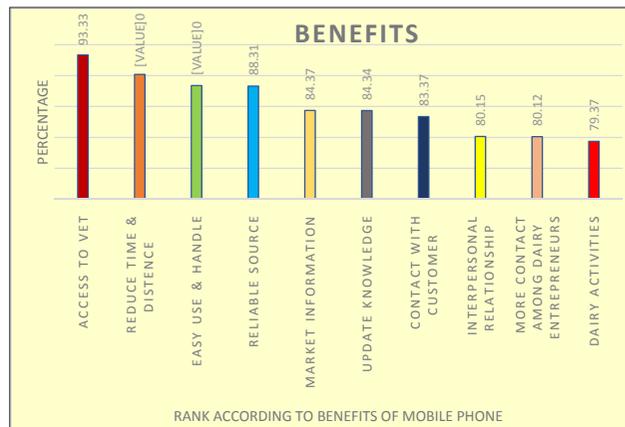


Fig. 1: Distribution of Dairy Entrepreneurs According to Benefits of Mobile Phone as an ICT Tool

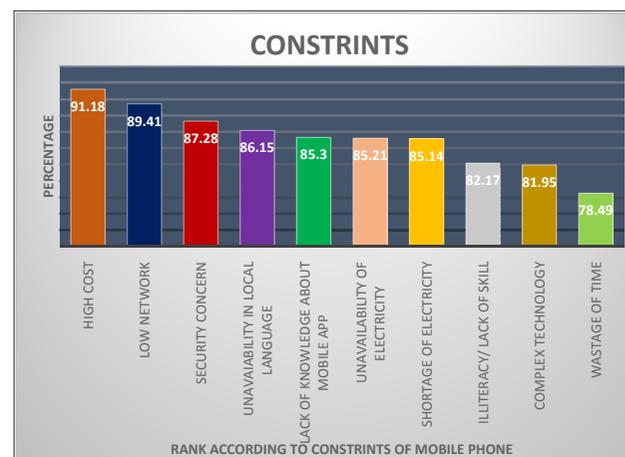


Fig. 2: Distribution of Dairy Entrepreneurs According to constraints of Mobile Phone as an ICT Tool

'Illiteracy / lack of skill / confidence' towards use of mobile phone with mean score of 82.17 was ranked as eighth constraint while ninth constraint reported by dairy entrepreneurs with mean score of 81.95 was 'Complex technology of mobile phone' followed by 'Use of mobile phone leads to wastage of time' as the tenth constraint with mean score of 78.49. These results are in line with the findings of Sharma and Arya (2005), Akpabio *et al.*, (2007), Sharma (2007), Kabir (2015), Syiem *et al.*, (2015) and Rathod *et al.*, (2016).



CONCLUSION

The research assessed the major benefits and constraints faced by dairy entrepreneurs regarding use of mobile phone as an ICT tool. The application of mobile phone in animal husbandry has emerged an important pillar of veterinary extension focusing on the enhancement of dairy and rural development through improved information and communication tools. Mobile phone as an ICT tool has potential to make the dairy entrepreneurs affluent as it provides requisite information in user friendly form which is easy to access and reduces time/distance barrier and at the same time poor connectivity and language barrier are few hurdles which needs to be given due attention to pave the way towards mobile phone application by dairy and farming community at large scale.

ACKNOWLEDGEMENTS

The authors sincerely thank the Associate Dean, Bombay Veterinary College, for providing the necessary facilities for conducting this research work. The authors are also grateful to all the dairy entrepreneurs for co-operation and sharing their valuable views during the study. The authors would like to acknowledge the editors of this journal for their valuable suggestions.

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