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Rashmi Durgapal and Rajshree Upadhyay

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# Designing of Multimedia CD on Government Digital Agriculture Initiatives and its Evaluation by Experts

Rashmi Durgapal\*<sup>1</sup> and Rajshree Upadhyay<sup>2</sup>

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## ABSTRACT

The study was planned to design multimedia compact disc (CD) on government digital initiatives in agriculture for farmers and conduct its assessment by experts. The study was conducted in Udaipur, Rajasthan. Initially, subject matter information on different agriculture related web portals and mobile applications was collected and approved by the experts and then a multimedia CD was developed. In line with purpose, a panel of experts from Department of Extension Education and Communication Management, Department of Agriculture, Department of Agricultural Extension and Farm Science Centre was selected. The CD was evaluated on visual and audio aspects separately on a five-point continuum from 'excellent' to 'poor' with scores 5 to 1, respectively. The findings revealed all the criteria for visual aspect were rated very good with scores ranged between 3.94 to 4.54 out of maximum score 5. Similarly, for audio aspect all the criteria were rated as excellent with scores ranged from 4.14 to 4.44 out of 5. This indicates the multimedia CD was considered as to be very good by the experts and can be used by agriculture professionals to disseminate information about use of agro-based portals and application to enhance digital penetration in the field of agriculture.

**Key words:** Agriculture, Evaluation, Experts, Farmer, Farm women, Mobile application, Multimedia CD, Web portal

Agriculture is unquestionably the largest livelihood provider in India, more so in the vast rural areas. It contributes a significant figure in the Gross Domestic Product (GDP) of country. According to NSO report (2020-21) [1], the percentage value of gross value added (GVA) of agriculture and allied sectors to total economy was found 20.2 per cent. Rural people are mainly engaged in agriculture and allied activities as their main occupation. The use of communication technologies has improved the economy and living standard of people and communities are getting benefit out of it. Several web portals and mobile applications launched by the Government and Private Organizations as a part of Digital India campaign few of them are Pradhan Mantri Fasal Beema Yojana, IFFCO Kisan, Plantix, Krishi Gyan, Soil Health Card, eNAM, Kheti-Badi, Pusa Krishi, AgriMarket and Kisan Rath. The sole purpose of these apps and portals is to ensure constant flow of information, availability of quality inputs, easy market access, transportation, weather alerts and linkages with the government agencies for policy support. Although there were numerous such platforms available to the farmers, their use was not thought to be sufficient. Majority of the farmers (77.78%) were

not aware of any single agricultural web sites followed by few the farmers (15.00%) were aware of up to two agricultural web sites whereas least percentage of farmers (2.22%) were found with awareness of more than five agricultural web sites [2]. Similarly, most of the millet growers (90%), rice growers (86.67%) and cotton growers (85%) of Tamil Nadu had low level of overall knowledge on accessing agriculture information through smartphones [3]. Educational initiatives regarding agro-based web portals and mobile apps can make a significant contribution in improving agriculture practices especially for small and marginal farmers. In different developing countries communication technologies have improve the economy and living standard of people and differ communities are getting benefit from these technologies. In this context, the present study was to design a multimedia CD on agro-based government web portals and mobile applications and evaluate it by experts to assess its effectiveness.

## MATERIALS AND METHODS

### Designing of multimedia CD

*Gathering subject matter information:* For developing multimedia CD on government digital initiatives in agriculture, agriculture related web portals and mobile applications which were launched by the government, available in Hindi language and useful for the farmers and farm women of Udaipur, Rajasthan, were selected. The selected portals and applications were Pradhna Mantri Fasal Beema Yojana web portal, Farmers' Portal, AgMarknet web portal, Soil Health Card web portal,

\* **Rashmi Durgapal**

✉ rashmi.durgapal2@gmail.com

<sup>1-2</sup> Department of Extension Education and Community Management, College of Community and Applied Sciences, Maharana Pratap University of Agriculture and Technology, Udaipur - 313 001, Rajasthan, India

mKisan web portal, eNAM mobile application and Kisan Suvidha mobile application. An in-depth review of research papers, magazines, internet and literature available at government official websites was done by the investigator.

**Identification of key areas:** The major key areas for each web portals and mobile application were identified which included brief introduction, opening/installation, language selection, major links available, type of information available under each link, accessing information and summarization.

**Script writing:** A detailed script was written in simple and easy to understand language based on the identified key areas and then a story board was prepared to determine the organization, description and presentation of visuals along with audio.

**Capturing visuals and audio recording:** For adding vegetables and fruits related visuals in multimedia CD moving and still shots were taken from Krishi Upaj Mandi and Delhi Gate Mandi, Udaipur and the shots of agriculture fields were captured from Udaipur (Rajasthan), Nainital and Dehradun (Uttarakhand). The screen recording of the web portals and mobile applications was done using the softwares *Camtasia Studio 7*, *Bandicam* and *ApowerREC*. The audio of multimedia CD was recorded using *HD recorder* and *Audacity* software.

Table 1 Component wise description of time duration of multimedia CD

Component	Minutes	Seconds
Introduction	2	27
Pradhan Mantri Fasal Beema Yojana	4	35
Farmers Portal	5	59
AgMarknet	3	28
Soil Health Card	4	06
mKisan	3	25
eNAM	4	12
Kisan Suvidha	5	09
Outro	0	15
Total duration	33	36

**Editing and synchronization of visuals and audio:** For synchronizing the visuals along with audio the software *Camtasia Studio 7* and *Adobe Premiere Pro CC 2018* was used. (Table 1) indicates here portal/ application wise time duration

of multimedia CD.

**Evaluation of multimedia CD:** The prepared multimedia CD was subjected to evaluation in order to determine its validity and appropriateness by a panel of 15 experts. The panel comprised of subject matter experts from State Department of Agriculture, Extension Education and Communication Management, Agriculture Extension and Farm Science Centre. An evaluation sheet having two sections i.e., visual and audio, was prepared. The visual assessment part included nine criteria viz. subject matter coverage, purpose accomplished, organization and layout, color, visual clarity, continuity in messages, synchronization of audio and visuals, and overall presentation. The audio assessment included ten criteria i.e., language, commentary, voice, continuity of messages, pace and speed of narration, length and time of narration, overall duration of program, music, interest orientation, overall presentation. The experts were requested and evaluation sheet was given to them to judge the multimedia CD on audio and visual aspect. Response of judges was evaluated on a five-point continuum i.e., excellent, very good, good, fair and poor with scores 5, 4, 3, 2 and 1, respectively.

## RESULTS AND DISCUSSION

### Evaluation of visual aspect of multimedia CD

The (Table 2) indicates the criteria wise and content wise mean weighted scores of evaluation of the visual aspect of multimedia CD. All the ten criteria were rated very good by the evaluators as the scores of each criterion ranged between 3.94 to 4.54 out of maximum score 5. The illustrations used in CD obtained highest score of 4.54 followed by criterion content coverage (4.51). The findings further reveal content wise mean weighted scores of the visual aspects. The overall criteria wise and portal/ application wise mean weighted score was found to be 4.29 out of five. The content of Kisan Suvidha mobile application had the highest mean weighted score i.e., 4.37 followed by the content of AgMarknet web portal (4.35), Soil Health Card web portal (4.31), mKisan web portal (4.30), eNAM mobile application (4.29), Pradhan Mantri Fasal Beema Yojana web portal (4.27), Farmers' Portal (4.25) and introduction (4.15) indicating the visuals of the multimedia CD to be very good. The visuals included in all the portals or applications in multimedia CD was neither rated as fair or poor by all of the experts.

Table 2 Mean weighted scores of evaluation of the visual aspect of multimedia CD by the experts (n=15)

Topic	Purpose accomplish	Content coverage	Logical sequence	Organization/ Layout	Illustration	Visual clarity	Self-explanatory	Attention catching	Synchronization of audio and visuals	Overall presentation	Total
Introduction	4.4	4.5	4.1	3.9	4.4	4.5	3.8	4.0	3.7	4.2	4.15
Pradhan Mantri Fasal Beema Yojana	4.6	4.7	4.3	4.3	4.4	4.3	4.1	3.8	3.9	4.3	4.27
Farmers' Portal	4.4	4.5	4.2	4.3	4.4	4.3	4.0	4.0	3.9	4.5	4.25
Agmarknet	4.5	4.3	4.4	4.4	4.7	4.4	4.10	4.1	4	4.6	4.35
Soil Health Card	4.4	4.5	4.5	4.3	4.7	4.3	3.8	4.1	4	4.5	4.31
mKisan	4.4	4.5	4.4	4.4	4.4	4.6	3.9	4.0	3.9	4.5	4.30
eNAM	4.5	4.5	4.2	4.2	4.7	4.4	3.8	4.1	4.1	4.4	4.29
Kisan Suvidha	4.4	4.6	4.3	4.5	4.6	4.5	4	4.2	4.1	4.5	4.37
Total	4.45	4.51	4.30	4.29	4.54	4.41	3.94	4.04	3.95	4.44	4.29

### Evaluation of audio aspect of multimedia CD

Criteria wise evaluation of audio in multimedia CD presented in (Table 3). The findings indicate that the audio aspect was rated very good by the experts. The mean weighted score for all seven criteria of audio aspect i.e., content clarity, voice, pace of narration, overall duration, background music,

interest orientation, and overall presentation was rated as excellent by the experts as the scores for all criteria was ranged from 4.14 to 4.44 out of 5. The criterion 'content clarity' obtained highest score i.e., 4.44 in booklet.

Concerning the mean weighted score of audio aspect of each portal/ application included in the multimedia CD the

(Table 3) further reveals that the Farmers' Portal had the highest mean weighted score value i.e., 4.40 followed by mKisan web portal (4.34). The audio aspect related to Pradhan Mantri Fasal Beema Yojana web portal and eNAM mobile application had the same mean score value of 4.33. Similarly, the audio of introduction, Soil Health Card and Kisan Suvidha mobile application had the same mean weighted score i.e., 4.30 followed by AgMarknet web portal (4.29). The overall criteria

wise and portal/ application wise mean weighted score was found to be 4.32 indicating the audio of the multimedia CD to be very good. The findings are in line with findings Durgapal [4] who found overall mean weighted score ranged from 4.0 to 4.21 for all the pamphlets related to environmental sanitation by the experts. Similarly, Dangi [5] found the mean scores for all the criteria of training module on nutrition for women was found between 4.06 to 4.38 out of five.

Table 3 Mean weighted scores of evaluation of the audio aspect of multimedia CD by the experts (n=15)

Topic	Content clarity	Voice	Pace of narration	Overall duration of a portal/app	Background music	Interest orientation	Overall presentation	Total
Introduction	4.5	4.4	4.1	4.3	4.1	4.3	4.4	4.30
Pradhan Mantri Fasal Beema Yojana	4.4	4.4	4.3	4.4	4.2	4.3	4.3	4.33
Farmers' Portal	4.5	4.5	4.2	4.4	4.2	4.5	4.5	4.40
Agmarknet	4.3	4.6	4	4.3	4.2	4.4	4.4	4.29
Soil Health Card	4.5	4.4	4.1	4.3	4.2	4.2	4.4	4.30
mKisan	4.4	4.4	4.1	4.4	4.3	4.4	4.4	4.34
eNAM	4.4	4.4	4.2	4.5	3.9	4.5	4.4	4.33
Kisan Suvidha	4.5	4.3	4.1	4.5	4.1	4.3	4.3	4.30
Total	4.44	4.43	4.14	4.39	4.15	4.36	4.39	4.32

## CONCLUSION

None of the criterion in both the aspects i.e., visual and audio was rated as fair or poor. The reason for such findings might be that the multimedia CD was prepared under the constant guidance of experts and their suggestions were

incorporated during the designing of multimedia CD. It can be concluded that the designed multimedia CD was evaluated by the experts as very good and can be used by the agriculture professionals to raise awareness and disseminate information about use of agro-based portals and application to enhance digital penetration in the field of agriculture.

## LITERATURE CITED

1. National Statistical Report (NSO) Report. 2022. Cited from <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1741942> retrieved on October 16, 2022.
2. Mooventhana P. 2016. Awareness about agricultural web education technology at farmer's level -an experimental study. *Indian Journal of Agricultural Research* 50: 282-284.
3. Kungumaselvan T, Theodore RK, Senthilkumar M, Prathap DP, Vanitha G, Duraisamy MR. 2022. Knowledge level of farmers in accessing agricultural information through smartphone. *Asian Journal of Agricultural Extension, Economics and Sociology* 40: 1123-1130.
4. Durgapal R, Upadhyay R. 2018. Development of pamphlets related to environmental sanitation. *M. Sc. Thesis*, Maharana Partap University of Agriculture and Technology, Udaipur.
5. Dangi S, Solanki D, Upadhyay R. 2021. Designing of training module on nutrition for women and its evaluation by experts. *Annals of Romanian Society for Cell Biology* 25: 14294-14299.