Full Length Article

DEVELOPMENT OF VIDEOS FOR SOCIAL MEDIA PLATFORM (YOUTUBE) FOR DISSEMINATION OF ANIMAL HUSBANDRY TECHNOLOGIES

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ABSTRACT

The current study focuses on development of videos for effective dissemination of information on scientific animal husbandry practices through social media platform (YouTube) channel (Pashu Pragna) created for the specific purpose. Four important topics were selected for video production namely, clean milk production, artificial insemination in sheep and goat, improving fat and SNF in lactating cows and various government schemes for livestock development. The content and quality of videos were evaluated and standardized, by a team of experts consisting of 30 members. The effectiveness of these uploaded Pashu Pragna channel videos were assessed by exposing them to a sample of 100 livestock farmers who possessed at least five milch animals or shepherds having a minimum of 20 sheep or goats in Kolar district of Karnataka. The progress was measured in terms of their knowledge gain. The results indicated that majority of the experts rated the videos as good, both in terms of content and quality. Likewise, majority of the respondents who were exposed to the videos through the channel provided highly satisfied feedback. Further almost all of them had acquired significant level of knowledge gain on immediate post exposure evaluation, which indicated the effectiveness of the developed videos streamed through YouTube channel.

Keywords: Social media, YouTube, Animal Husbandry Technologies, Extension

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INTRODUCTION

Livestock population in India was 192.49 million cattle (35.94%), 109.85 million buffaloes (20.45%), 74.26 million sheep (13.87%) and 148.88 million goats (27.80%) in the year 2019 (Basic Animal Husbandry and Fisheries Statistics, 2019). Total annual milk production is India in the year 2021-22 was 221.06 MT with per capita availability (PCA) of 444 g/day. The meat production was 9.29 MT with per capita availability of 6.82 kg/year (Press Information Bureau, Delhi, 2023). Despite having remarkable livestock production status, this sector is facing various constraints, especially, the poor livestock productivity. Efforts are being undertaken by public and private organizations to address these issues by creating awareness through extension activities and social media. Social media platforms have acquired a significant role in filling the above gap.

The world of today is the world of 'Social Media'. Face book, Twitter, YouTube, LinkedIn, WhatsApp and other social media platforms have become more popular means to share information (Balkrishna and Deshmukh, 2017). The number of YouTube viewers worldwide is 2.49 billion up from 2 billion in 2019 (Brien, 2024).YouTube users in India being 459.23 million in 2021 (Degenhard, 2021) increased to 467 million as of July 2023 (CECI, 2023). Hence, creation of learning modules and disseminating them through YouTube and other social media would allow for faster spread of scientific information. In this context, a study was undertaken to develop Animal Husbandry technology videos, disseminate them through YouTube and to assess the effectiveness of this process.

MATERIALS AND METHODS

Development of videos on scientific animal husbandry management practices

Four videos were developed on important Animal Husbandry practices namely, clean milk production (CMP), artificial insemination (AI) in sheep and goats, improving fat and SNF (Solids Not Fat) in lactation cows and various Government schemes for livestock development. The development of videos was conceived under following steps namely, planning, scripting, recording, editing and evaluation. Under planning, the critical information on the selected scientific animal husbandry practices was clearly defined and collected. Subsequently, thorough scripting, recording, video and audio editing were done. The final output was taken in MP4 format for dissemination through social media platform namely YouTube channel.

Evaluation and standardization of the videos

The evaluation of developed videos was done both with respect to content and quality. This was carried out by an evaluation team (30 members) which comprised of academicians (n=10), field veterinarians (n=10) and progressive farmers (n=10) using a semi-structured questionnaire. The content evaluation included aspects like introduction of each topic, coverage of subject matter, inclusion of up-to-date

information on each of the scientific animal husbandry practices and sufficiency of information as per the need of the livestock farmer. Quality assessment of the videos was done under five sub-headings namely, attractiveness, ability to hold interest, usage of visuals, production skills and presentation skills. The responses were recorded in three point scale as good, fair and poor.

Effectiveness of videos uploaded in *Pashu Pragna*

The effectiveness of videos was assessed using knowledge test which is expressed in terms of knowledge gain and by taking feedback from the respondents. Knowledge gain is operationally defined as the extent of knowledge gained by the farmers as well as shepherds on scientific animal husbandry management practices, after they were exposed to the videos.

The respondents were selected from Kolar district of Karnataka. Out of six taluks in the district, two taluks *viz.,* Kolar and Bangarapet were selected purposively based on highest livestock population in the district. From each selected taluk four Veterinary Hospital (VH) circles were selected purposively with highest livestock population. Under each of these VH circles, five villages were selected again with the same criteria. From these 20 villages, five farmers were randomly selected who possessed at least five milch animals or shepherds having a minimum of 20 sheep or goats thus constituting a sample size of hundred (n=100) for the study. For dissemination of information among the livestock farmers a YouTube channel named '*Pashu Pragna'* was created on 6th December, 2021 and the developed videos were uploaded and made available for viewing. The study was conducted during the period from December 2021 to January, 2022.

To quantify the knowledge gained by the respondents a schedule was developed which consisted of questions pertaining to various aspects of the selected scientific animal husbandry practices. The schedule was administered to the respondents and the responses were recorded on dichotomous pattern. A score of two was given for correct response. The scores of correct responses of all knowledge items were summed up for each respondent separately before and after exposure to the videos to assess the knowledge gain. Feedback on various aspects of the disseminated videos was collected using a structured schedule. The respondents were asked to mention about their experience to the videos as highly satisfied, satisfied and not satisfied and the respondents experience was expressed in percentage.

RESULTS AND DISCUSSION

Development of videos

The videos on CMP, AI in sheep and goats, improving fat and SNF in lactating cows and various government schemes for livestock development were developed with duration ranging from 4 to 8.8 minutes by keeping in view of the attention span of viewers. The final videos were brought out in MP4 format (Table 1), allowing for easy access and further uploading in YouTube.

Evaluation and standardization of videos

Majority of the experts as given in Table 2 perceived content of the videos as good in terms of introduction to topic (93.33%), coverage of subject matter (76.67%), inclusion of up-to-date information (76.67%) and sufficiency of information (90.00%). The results that relevant content was included in the videos. Addressing the current problems and their solutions, planned preparation and thorough scripting of subject matter with SMS consultations, attractive visuals and aesthetic voiceover, might have made it possible.

Further, majority of the experts rated quality of videos (Table 3) as good in terms of attractiveness, holding interest, use of visuals, production skills and presentation skills in the videos. This might be due to inclusion of need-based content with simple local language, expressing clear use of attractive visuals, music and presentation. Logical sequence, recording visuals using high end camera, execution of the production plan as per the story board and short durations for easy sharing could be the other reasons. The results were in accordance with the findings of Anandaraj *et al.* (2006), Pradeep (2011), Sonia and Christopher (2011), Anuradha and Archana (2012) and Megaraj *et al.* (2021).

Effectiveness of the *Pashu Pragna* videos

The effectiveness of uploaded videos were assessed in terms of knowledge gain by the respondents. The results (Table 4) showed that there was a significant gain in knowledge immediate post exposure to videos. The mean gain in knowledge on various to topics i.e. clean milk production, artificial insemination in sheep and goats, improving fat and SNF in lactating cow and various government for livestock development were 6.13, 6.56, 6.13 and 4.38 respectively, which was statistically significant at one per cent i.e. ($P<0.01$). Further, there was significant overall knowledge gain between pre exposure (13.16) and post exposure (18.90) to the *Pashu Pragna* videos (P value 0.000), This could be due to relevant content, usage of appropriate and relevant pictures, visuals and text voiceover. The other reasons might be explanatory ability of videos which transcends limitations of literacy. The findings were in line with Vidya *et al.* (2010) and Megaraj *et al.,* (2021).

Feedback by farmers on the *Pashu Pragna* videos

The feedback of the farmers was encouraging (Table 5). Majority of the respondents expressed highly satisfied response with all the 12 criteria included to reflect upon the videos. The reasons might be due to incorporation of videos which were natively captured in the Veterinary college, Hebbal, Bengaluru campus, Hesaraghatta, milk producers co operative societies in the study area and likewise the messages conveyed in vernacular language *i.e.* Kannada and description of prevailing challenging situation with its solutions. These findings were in line with Anandaraj *et al.* (2006), Pradeep (2011), Sonia and Christopher (2011) and Megaraj *et al.* (2021).

Dissemination through YouTube channel

The videos were uploaded on December 6th 2021. After 28 days of uploading there were 3k viewers and 218 subscribers. Subsequently, after the study period in addition to the above videos, videos on green and dry fodder and silage making using silo bags were uploaded to the channel. The total number of views for all videos was 105.47k as on 22-02-25 with 1.33k subscribers indicating its relevance and effectiveness.

CONCLUSION

Four videos on selected scientific management practices were developed, and were subjected to evaluation and standardization by a team of experts and were perceived as good. The social media-YouTube channel called *Pashu Pragna* was created on December 06, 2021 in order to disseminate the standardized videos. The feedback and knowledge of livestock farmers upon exposure were assessed. The results revealed that there was a significant knowledge gain among the respondents immediately after exposure to the videos. Further, the feedback on the videos was highly satisfactory. The number of views and subscription to the channel has risen progressively from the time of the study indicating the effectiveness of the channel.

Table 1: Details of the duration and size of the videos developed

Sl. No.	Videos developed	Duration	Size
1	Clean milk production	4 min 55 sec	360 MB
2	Artificial insemination in sheep and goats	5 min 13 sec	153 MB
3	Improving fat and SNF in lactating cows	8 min 48 sec	243 MB
4	Various government schemes for livestock and livestock farmers' development	5 min 45 sec	128 MB

Table 2: Content evaluation of developed videos by the evaluation team (n=30)

Aspects of videos	Overall		
	Good	Fair	Poor
Introduction to topic	28 (93.33)	02 (6.67)	00 (0.00)
Coverage of subject matter	23 (76.67)	07 (23.33)	00 (0.00)
Inclusion of up-to-date information regarding selected topic	23 (76.67)	07 (23.33)	00 (0.00)
Sufficiency of information	27 (90.00)	03 (10.00)	00 (0.00)

Figures in the parenthee are percentages

Table 3: Quality assessment of developed videos by the evaluation team

(n = 30)

Traits	Quality assessment	Good	Fair	Poor
Attractive-ness	Opening of videos to capture audience attention	27 (90.00)	03 (10.00)	0
	Ability to arouse interest	26 (86.66)	04 (13.34)	0
	Ability to convey clarity on purpose	26 (86.66)	04 (13.34)	0
	Understandability of video on selected topic	29 (96.66)	01(3.34)	0
Holding interest	Ability to hold interest	25 (83.33)	05 (16.67)	0
	Inclusion of visuals practical facts	27 (90.00)	03 (10.00)	0
	Appropriateness of video for educating dairy farmers	25 (83.33)	05 (16.67)	0
	Simplicity in presentation	28 (93.33)	02 (6.67)	0
	Clear and in logical order	30 (100.00)	00(0)	0
Use of visuals	Usage of visuals in accordance with subject matter	21 (70.00)	09 (30.00)	0
	Usage of visual in giving clarity of message	29 (96.66)	01 (3.34)	0
	Background contrasting of videos	21(70.00)	09 (30.00)	0
Production skills	Transmission smoothness of videos	29 (96.66)	01 (3.34)	0
	Synchronization of visuals with voice over	23 (76.66)	07 (23.34)	0
	Videography and photography used	20 (66.66)	10 (33.34)	0
	Maintenance of sequence	24 (80.00)	06 (20.00)	0
Presentation skills	Narration of subject matter in interesting manner	27 (90.00)	03 (10.00)	0
	Voice over given	27 (90.00)	03 (10.00)	0
	Background music used in videos	26 (86.66)	04 (13.34)	0
	Duration of videos	24 (80.00)	06 (20.00)	0
	Appeal for adoption	25 (83.33)	05 (16.67)	0

*Values within parenthee are percentages

Table 4: Details of knowledge gain throuhh uploaded videos (n=100)

Sl. No.	Practices	Mean knowledge scores			Paired t-test P value
		Pre exposure	Post exposure	Knowledge gain	
1	Clean milk production	12.69	18.82	6.13	0.000**
2	AI in sheep and goat	12.31	18.87	6.56	*0.000**
3	Improving fat and SNF in lactating cow	12.69	18.82	6.13	0.000**
4	Various schemes in Government for livestock development	14.73	19.11	4.38	0.000**
	Overall	13.16	18.90	5.74	0.000**

**Paired t test P <0.01, indicating statistical significance at 1 per cent level of significance.

Table 5: Feedback of livestock farmers on uploaded videos (n=100)

Sl. No.	Particulars	Highly satisfied	Satisfied	Not satisfied	Chi square P value
1	Language and voice over used in the narration	83*	15	02	<.0001
2	Sequencing of visuals in relation to narration	72	28	00	<.0001
3	Background music used in the videos	60	29	11	<.0001
4	Logical presentation	76	24	00	<.0001
5	Quality of visuals used in the narration	63	34	03	<.0001
6	Arousal of curiosity and interest	65	32	03	<.0001
7	Simplicity in understanding of Information	90	08	02	<.0001
8	Relevance and appropriateness of content	90	10	00	<.0001
9	Suitability of the information to field condition	79	16	05	<.0001
10	Provides complete knowledge	74	25	01	<.0001
11	Motivates to learn subject	52	47	01	<.0001
12	Motivates to adopt practices in farm	70	30	00	<.0001

* P<.0001

** Indicates statistical significance of feedback responses (i.e., between highly satisfied, satisfied and not satisfied at 1% level of significance)

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