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Communication training needs of scientists at Krishi Vigyan Kendras in western India: A comprehensive evaluation

[1]Kishor Kumar N, [2]Savaliya VJ, [3]Rishi G, [4]Krimpal K and [5]Pranav R

[1]Subject Matter Specialist (Extension), Krishi Vigyan Kendra, Kondempudi, Andhra Pradesh, India

[2]Associate Professor, Office of Directorate of Extension, Junagadh Agricultural University, Junagadh, Gujarat, India

[3]Ph.D. (Ag.) Research Scholar in Agricultural Extension, College of Agriculture, Junagadh Agricultural University, Junagadh, Gujarat, India

[4]Ph.D. (Ag.) Research Scholar in Agricultural Extension, College of Agriculture, Junagadh Agricultural University, Junagadh, Gujarat, India

[5]Ph.D. (Ag.), Research Associate, Office of Directorate of Extension, College of Agriculture, Junagadh Agricultural University, Junagadh, Gujarat, India

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Corresponding Author: Kishor Kumar N

Abstract

The present research study on assessing the training needs of scientists at Krishi Vigyan Kendras in Western India which was conducted as a part of Ph.D. (Ag.) programme in the state of Gujarat during 2021-22. The study was conducted in Western India which consists of Gujarat, Rajasthan, Maharashtra and Goa states. All the KVKs in the Western India were purposively selected for the study. Considering the total number of KVKs in Western India, 160 respondents were selected for the study. The *Ex-post facto* research design was followed for carrying out the study. The KVK scientists perceived that greater need for training in respect of communication methods: Conducting demonstrations and about the training in presentation skills: Effective preparation of presentation. Regarding training related to visual aids: Designing power point and concerned to the training in preparation of communication literature: Technical writing. In respect to training related to ICT's: Website design and regarding training related to mobilization farmers: Motivating farmers was very much needed.

Keywords: Scientists**,** Krishi Vigyan Kendra, training needs

Introduction

The agricultural development is very essential for poverty alleviation and overall economic development of any country. Agricultural sector in India has been successful in on par with the rising food demand of a growing population, which has crossed one billion marks. The green revolution has been the milestone of India's agricultural achievement, transforming the country from one of the dependencies to self-sufficiency. Agricultural research and extension played a major role in green revolution and food self-sufficiency. The changing economic scenario in India need an appropriate technology and agro management practices to respond to food and nutritional security, diversified market demands, export opportunities and environment concern posing new challenges to technology dissemination systems. The Indian agricultural landscape faces many challenges, including a high percentage of smallholder farmers, lack of supply chain infrastructure, and extreme weather conditions. In the present era of technology explosion, a steady flow of agricultural knowledge leads to the gap what is generated by the researcher and what is practiced by the users. A rapid transfer of technology from research scientists to farmers largely depends upon the communication techniques used by extension personnel and scientists. There is a continuing need to provide right information to people to take decisions that make the difference to their livelihoods. The information need of the farmers is diverse and they also searched different sources for getting information on agriculture and scientists of KVKs were one of the important sources of knowledge of the farmers in Nagaland (Jamir and Sharna, 2018) [5]. It was observed that 88.33 per cent of the respondents perceived that the extension services implemented by Krishi Vigyan Kendra were useful to more useful for them whereas one-tenth (11.67%) of the respondents were not satisfied with the efforts of the KVKs regarding the dissemination of knowledge (Sarnaik *et al.*, 2020) [9].

KVK is an Agro-based capacity building institution for the farmers to provide need based teaching on various aspects of agriculture and allied sectors. KVKs impart latest technical know-how and do-how to different clientele by formulating various programmes with the principles of learning by doing, seeing is believing, earn while you learn to achieve the desirable changes pertaining to their knowledge, skills and attitude with a view to help them live better by improving their farm and allied enterprises. With

the advancement of science and technology day by day new technologies are blooming in agriculture field and Agricultural research stations are engaged in checking the location specificity of these new technologies. These location specific technologies those are suitable to particular area should be communicated effectively to farmers for wider adoption to harvest the better returns and to bring out them from distress and drudgery. With this view, Indian council of agricultural research had established KVKs for the effective transfer of location specific information to the farmers. The extension worker (Scientist of KVK) cannot expect change among farmers unless he/she is able to communicate effectively to them. Effective communication could be possible when obstacles in communication should be removed through need-based trainings to the scientists. Keeping this in view, the study "Training Needs of Scientists at Krishi Vigyan Kendras in Western India" was carried out.

Objective

To study the communication training needs of the scientists of Krishi Vigyan Kendra in Western India

Materials and Methods

The study was conducted in Western India consisting of Gujarat, Rajasthan, Maharashtra and Goa states. A simple random sampling technique was used for this study. All the states of the Western India *i.e.*, Gujarat, Rajasthan, Maharashtra and Goa were selected purposely for the study and all the KVKs of Gujarat, Rajasthan, Maharashtra and Goa were purposely selected for the study. Considering the total number of KVKs in Western India, 160 respondents were selected for the study. Communication training need areas of KVK scientists were identified by structured questionnaire with open ended questions. These areas were divided into six major areas. Each area was further divided into sub area of communication and the choices of KVK scientists were sought about each sub area of communication. On the basis of their replies rank orders were given to each sub area based on their mean scores.

Results and Discussion

The table 1 focuses on communication training needs of KVK scientists. It could be concluded from the table that training in conducting demonstrations with 2.84 MS, was on first rank. Campaign was on second rank with 2.66 MS, whereas, kisan mela was on third rank with 2.58 MS. The fourth rank was occupied by Nonverbal communication, followed by focused group discussion (V), T.V presentation skills (VI) and radio talk presentation skills (VII). It can be concluded that they require training on conducting demonstrations, followed by organizing campaigns and kisan melas.

The implication of the afore mentioned result is that the KVK scientists had indicated greater need for training in respect of demonstrations and the campaigns were the next preferred areas in the need hierarchy. This trend can be explained in the context of the latest strategy of agricultural extension that, during the visits of KVK scientists to farmers, it is mandatory to initiate demonstrations to teach skills involved in agricultural technologies.

About the training in presentation skills the respondents had given first rank to effective preparation of presentation (I), followed by combining different methods (II), improvement of public speech (III), ideas to be incorporated in to visuals (IV), message clarity (V), improvement in body gesture (VI), captions / illustrations (VII) are given the least ranks. Thus, it can be summarized that there is an urgent need for the training on effective preparation of presentation and combining different methods in addition they require training on use of captions/illustrations, these training on the above methods should be organized.

Regarding training related to visual aids the first rank was given to designing power point, followed by designing flip/strip charts (II), use of flannel graphs (III), designing flash cards (IV). It infers that designing power point was given first rank because this is the mostly used for the presentation whenever they have opportunity, they use power point presentations secondly, they use charts but the other two not regularly used by the respondents hence there is an urgent need to organize training on the designing power point and designing charts.

Concerned to the training in preparation of communication literature technical writing was placed first among all, followed by computer aided design (II), designing bulletins/pamphlets (III), designing posters (IV), use of appropriate colours (V), editing skills (VI). The KVK scientists require training mostly in technical writing and for computer aided design and designing pamphlets. The KVK scientists mostly depending on DTP shop persons on payment basis. Hence the department should organize training in these methods as it saves money and moreover the respondents can design on their own and include the exact thought. Further, they can also incorporate some innovative ideas. With the advent of the flex printing the usage of the posters has drastically reduced even though some KVK scientists preparing the posters on their own. Hence the training should be given on the above areas.

In respect to training related to ICT's website design was given first rank, followed by mobile applications usage. Mobile applications were increased enormously. The government is releasing the apps without training. They are giving namesake training to the extension personnel. Effective trainings should be imparted.

The training in using expert system was given third rank as most of the respondents doesn't know how to use the expert system. A less proportion of the respondents needed training in browsing the internet for information (IV), development of e-learning Modules (V), uploading and downloading of information from the internet (VI) and use of CD-ROM for information documentation (VII).

Regarding training related to mobilization of farmers the respondents felt motivating farmers was very important hence given first rank, followed by strengthening and revitalizing community was given second rank, forming the farmers groups (III), improving group cohesion (IV) and identifying potential group leaders in community (V). Hence trainings should be organized on aforesaid areas. These findings are in line with Kharde *et al.* (2014) [7], Kehinde and Ayobami (2015) [6], Said and Gokul (2015) [8], Timothy (2015) [10], Al-Zahrani *et al.* (2017) [1], Babu (2017) [3] and Bhattacharjee and Saravanan (2018) [4].

Table 1: Communication training needs of KVK scientists (n=160)

Sr. No.	Item	Very much needed	Moderately needed	Not needed	Total score	Mean	Rank
1	**Communication Methods**						
a	Radio talk	24	45	91	253	1.58	7
b	T.V talk	73	57	30	363	2.27	6
c	Nonverbal communication	99	42	19	400	2.50	4
d	Group discussion	87	58	15	392	2.45	5
e	Demonstrations	120	45	5	455	2.84	1
f	Campaign	112	40	8	424	2.65	2
g	Kisan mela /farmers fair	107	38	15	412	2.58	3
2	**Training in presentation skills**						
a	Improvement of public speech	101	42	17	408	2.55	3
b	Improvement in body gesture	77	54	29	383	2.39	6
c	Effective preparation of presentation	123	31	6	437	2.73	1
d	Message clarity	82	59	19	396	2.48	5
e	Captions / illustrations	69	62	91	368	2.30	7
f	Ideas to be incorporated in to visuals	91	54	15	404	2.53	4
g	Combining different methods	108	32	20	422	2.64	2
3	**Use of visual aids**						
a	Designing flip/strip charts	82	57	21	402	2.51	2
b	Use of flannel graphs	109	33	18	381	2.38	3
c	Designing Flash cards	99	44	17	356	2.23	4
d	Designing power point	72	52	36	411	2.57	1
4	**Preparation of communication literature**						
a	Designing bulletins/pamphlets	111	38	11	414	2.59	2
b	Computer aided design	109	36	15	404	2.53	3
c	Designing posters	101	42	17	390	2.44	4
d	Technical writing	96	38	26	420	2.63	1
e	Use of appropriate colours	81	51	28	376	2.35	5
f	Editing skills	77	62	21	373	2.33	6
5.	**Training in ICT**						
a	Website design	89	39	32	425	2.66	1
b	Uploading and downloading of information from the net	102	46	12	410	2.56	4
c	Browsing the internet for information	42	68	50	347	2.17	6
d	Use of CD-ROM for information documentation	69	49	42	312	1.95	7
e	Using expert system	107	41	12	415	2.59	3
f	Mobile applications	110	42	8	422	2.64	2
g	Development of **e** - learning Modules	113	39	8	377	2.36	5
6	**Mobilization of farmers**						
a	Forming the farmers groups	119	37	4	407	2.54	3
b	Motivating farmers	113	38	9	435	2.72	1
c	Strengthening and revitalizing community	103	41	16	424	2.65	2
d	Improving group cohesion	97	45	18	405	2.53	4
e	Identifying potential group leaders in community	92	61	7	399	2.49	5

Conclusion

To enhance the communication behaviour of scientists, it is imperative to implement targeted training programs focused on the latest communication technologies, skills, and modern methods. Administrators and policymakers should prioritize these initiatives, emphasizing areas where Krishi Vigyan Kendra (KVK) scientists currently need training, such as handling modern ICT tools, engaging with journals, bulletins, and newspapers, utilizing extension teaching methods and processes, writing success stories, and developing e-learning modules. Regular training sessions conducted by experts and senior scientists will ensure that KVK scientists gain firsthand knowledge of new research findings and technologies. Additionally, frequent seminars and workshops should be organized to educate KVK scientists on technical and communication interactions. These efforts will significantly enhance their ability to communicate effectively with both fellow researchers and farmers.

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