



Original Research

Perceived Constraints in Organization of Farmers Training: A Case of Krishi Vigyan Kendras in Maharashtra State

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Abstract

The present study was conducted in Maharashtra state to ascertain constraints in organization of farmers' training perceived by trainers of Krishi Vigyan Kendras and document suggestions in enhancing the effectiveness of training. Each five KVKs, under State Agricultural Universities (SAUs) and Non-Government Organizations (NGOs) were selected randomly and data were collected using questionnaire from 43 respondents as trainers of KVKs. Most of the respondents (55.81%) perceived low level of constraints in organization of farmers' training. However, unwillingness of trainees to attend on-campus training (Mean score 2.023) was the most perceived constraint. There was no significant difference in relation to overall constraints amongst trainers across both type of KVKs. 'Need based, practical and skill oriented trainings', 'the development of infrastructural facilities at KVK', 'more emphasis on off-campus training' etc. were the most important suggestions for enhancing the effectiveness of training.

Key words: Constraints, Krishi Vigyan Kendra, Suggestions, Trainer, Training

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Introduction

The Indian Council of Agricultural Research has a well-established frontline extension system in the form of Krishi Vigyan Kendras (KVKs) for effective dissemination of new technologies for the benefit of farmers and plays an important role in the agriculture development in India. KVKs are the real carriers of frontline technologies for the farmers. KVK acts as mini university at the district level, which have six subject matter specialists of different subjects. At present the numbers of KVKs have grown up to 706 (retrieved from <https://icar.org.in/content/krishi-vigyan-kendra>) distributed all over the country. KVKs impart training on





various agricultural and allied disciplines through work experience to practising farmers, farm women, rural youth and extension functionaries. Training is an essential component for appropriate human resource development in order to meet the new challenges. The KVK being an educational institution of the farmers offers a very real opportunity by organizing training to work closely with trainees in developing a more skilled and educated work force. Sharma *et al.* (2013) opined that experience with the farmers training centres showed that by and large, these had failed to have desired impact, while some of the KVKs have been effectively contributing to the technology development and promotion process, many are plagued with several problems.

The World Bank (1990) found that many KVKs' training courses were under subscribed, raising doubts about their relevance. It was suggested to initiate an objective and scientific evaluation of all KVKs so that a case-by-case assessment could be made to guide the type and level of any further support (Chander, 2015). In KVK, every scientist has responsibly to play a varied set roles related with their position and assigned activities including training. However, many more would likely to face constraints while executing these activities. Assessment of constraints might indicate the type of improvement and further needed support. With this background and considering training as important activity of KVK, the present study was conducted to assess personal profile of trainers, perceived constraints in organization of training and document the suggestions by them to enhance the effectiveness of training.

Materials and Methods

The present study was conducted in Maharashtra, where 47 KVKs are functioning, out of which, majority (59.57%) of KVKs are under administrative control of NGOs (28), followed by 36.17 per cent under SAUs (17) and only one KVK are each under ICAR institute and Open University. Five SAU-KVKs (*viz.* Yavatmal, Chandrapur, Wardha, Aurangabad and Solapur districts) and five NGO-KVKs (*viz.* Washim, Jalgaon, Akola, Ahmednagar and Nanded districts) were selected randomly. The respondents were KVKs' trainers including Heads, Subject Matter Specialists and Programme Assistants those directly involved in organization of the training. The data were collected by using structured mailed questionnaire from 21 trainers of SAU-KVKs and 22 trainers working in NGO-KVKs, thus comprising the total sample size of 43 respondents. Socio-personal attributes of KVKs' trainers *viz.* age, sex, family background, marital status, family type, education, family occupation, discipline, membership of professional society, service experience and distance of residence from the place of posting were included in the study. Constraints experienced by trainers in organization of training were measured by using constraint index developed by Meena *et al.* (2013) and grouped it into 'most serious', 'serious' and 'less serious' categories. Index developed by Meena *et al.* (2013) was used to record the suggestions towards effective organization of



training and ranked *as per* Garrett method of ranking. The obtained data were analyzed with the help of mean, frequency, percentage and Pearson chi-square test.

Results and Discussion

Socio-Personal Variables

It is evident from Table 1 that majority of the respondents (79.07%) were male and belonged to the middle category (44.19%) of age between 35 to 45 years. It was observed that majority of the respondents were married (90.70%), belonged to rural background (72.09%) and had joint family (67.44%). KVK service was the major source of income for the family of most of the respondents (93.02%), while 51.16 per cent trainers reported that their family had no any other secondary source of income. Most of the respondents (55.82%) were educated up to master degree, followed by doctorate degree (34.88%). Veterinary Science/Animal Husbandry and Dairy Science (AHDS) was the leading discipline of 20.93 per cent respondents, followed by Agronomy (13.95%) and Extension Education (13.95%). As far as the distance of residence from KVK, majority (55.81%) of the respondents were residing at or below 5 kilometers distance from KVK with an average 7.40 kms. Further, data revealed that majority (48.84 %) of respondents had no membership of any professional society, followed by life members (46.51%). With overall average of 9.13 years, the most (48.84%) respondents had up to five years of service experience in KVK, followed by equally each 25.58 per cent medium (6 - 16 years) and high (17 years and above) experience. The findings of the study commensurate with Kumar and Kaur (2014), who conducted a study in the states of Punjab, Haryana and Himachal Pradesh and reported that majority of KVK functionaries were male, middle aged, married, rural based, reside at distance 1 to 53 kilometres, service as major source of family income and service experience 1 to 11 years, whereas, it contradicts in context with family type, discipline, membership of professional society and educational qualification of KVK functionaries. The findings of the study also contradict with Rajput (2011) and Ramakrishnan (2013) with respect to education and service experience, while it is in line with Kumar (2004) regarding educational qualification.

NGO-KVKs' trainers with mean age (41.82 years) were found to be comparatively older than the trainers working in SAU-KVKs with mean age 34.90 years. Result presented in Table 1 depicts that there were significant difference in age, service experience level of trainer and family type ($p < 0.05$) across both type of KVKs. The differences in age and experience level might be due to the recent appointments of subject matter specialists in majority of the SAU-KVKs. Whereas, there were no significant difference between trainers of SAU-KVKs and NGO-KVKs regarding sex, marital status, family background, main and secondary source of income, educational qualification, discipline, distance of residence from KVK and membership of professional society.

Table 1: Distribution of respondents according to their socio-personal attributes

S. No.	Socio-personal variables		Host Institute		Pooled	X ² value
			SAUs-KVK	NGOs-KVK	N=43	
			n=21	n=22		
1	Age	Young (24 to 34 yrs)	8 (38.10)	6 (27.27)	14 (32.56)	7.983*
		Middle (35 to 45 yrs)	12 (57.14)	7 (31.82)	19 (44.19)	
		Old (46 to 55 yrs)	1 (4.76)	9 (40.91)	10 (23.25)	
	Mean ± SD	34.90±4.77	41.82±8.17	38.44±7.516		
2	Sex	Male	14 (66.67)	20 (90.91)	34 (79.07)	3.851
		Female	7 (33.33)	2 (9.09)	9 (20.93)	
3	Marital status	Married	18 (85.71)	21 (95.45)	39 (90.70)	1.208
		Unmarried	3 (14.29)	1 (4.55)	4 (9.30)	
4	Family background	Rural	14 (66.67)	17 (77.27)	31 (72.09)	0.601
		Urban	7 (33.33)	5 (22.73)	12 (27.91)	
5	Family type	Nuclear	3 (14.29)	11 (50.00)	14 (32.56)	6.241*
		Joint	18 (85.71)	11 (50.00)	29 (67.44)	
6	Main source of income	KVK service	19 (90.48)	21 (95.45)	40 (93.02)	0.41
		Agriculture	2 (9.52)	1 (4.55)	3 (6.98)	
7	Secondary source of income	KVK service	2 (9.52)	1 (4.55)	3 (6.98)	1.552
		Agriculture	9 (42.86)	8 (36.36)	17 (39.53)	
		Business	0 (0.00)	1 (4.55)	1 (2.33)	
		No any other	10 (47.62)	12 (54.54)	22 (51.16)	
8	Education	Bachelor degree	2 (9.52)	2 (9.09)	4 (9.30)	1.244
		Master degree	10 (47.62)	14 (63.64)	24 (55.82)	
		Doctor of Philosophy	9 (42.86)	6 (27.27)	15 (34.88)	
9	Discipline	Home Science	2 (9.52)	2 (9.09)	4 (9.30)	10.56
		Agronomy	2 (9.52)	4 (18.18)	6 (13.95)	
		Plant pathology	0 (0.00)	2 (9.09)	2 (4.66)	
		Horticulture	1 (4.76)	4 (18.18)	5 (11.63)	
		Entomology	2 (9.52)	1 (4.55)	3 (6.98)	
		Agri. Engineering	3 (14.29)	1 (4.55)	4 (9.30)	
		Vet. Science /AHDS	4 (19.05)	5 (22.72)	9 (20.93)	
		Extension Education	4 (19.05)	2 (9.09)	6 (13.95)	
		Agri. Economics	0 (0.00)	1 (4.55)	1 (2.33)	
		Soil Science	1 (4.76)	0 (0.00)	1 (2.33)	
		Computer Science	1 (4.76)	0 (0.00)	1 (2.33)	
		Food Science	1 (4.76)	0 (0.00)	1 (2.33)	
10	Distance of residence from KVK	Close (5 to below 5 Kms)	13 (61.91)	11 (50.00)	24 (55.81)	1.478
		Medium distance (6 to 15 Kms)	6 (28.57)	10 (45.45)	16 (37.21)	
		Long distance (16 Kms and above)	2 (9.52)	1 (4.55)	3 (6.98)	
	Mean± SD	8.76±14.92	6.10± 5.41	7.40± 10.81		
11	Membership of professional society	No membership	9 (42.86)	12 (54.54)	21 (48.84)	0.606
		Annual membership	1 (4.76)	1 (4.55)	2 (4.65)	
		Life membership	11 (52.38)	9 (40.91)	20 (46.51)	
12	Service experience	Low (5 yrs & below)	14 (66.67)	7 (31.82)	21 (48.84)	9.770*
		Medium (6 to 16 yrs)	6 (28.57)	5 (22.73)	11 (25.58)	
		High (17 yrs & above)	1 (4.76)	10 (45.45)	11 (25.58)	
	Mean± SD	4.69± 4.38	13.37±9.76	9.13±8.72		

Figures in parentheses indicate percentage; *Significant at 5% level

Constraints Perceived by Trainers in Organization of Training

Overall Level of Constraints

The data presented in Table 2 reflects that most of the respondents (55.81%) perceived low level of constraints in organization of farmers' training, followed by medium and high level of constraints by 37.21 and 6.98 per cent respondents, respectively. In both streams, constraints perceived by the respondents were low to medium level. However, it is quite obvious to find high level of constraints amongst 13.64 per cent respondents working in NGO-KVKs with an average score 16.77 whereas, no constraint perceived in high level of category by the trainers of SAU-KVKs.

Table 2: Distributions of trainers according to their overall constraint level in organization of training

Constraint Level in Organization of Training	Host Institute		Pooled N=43
	SAU-KVK n=21	NGO-KVK n=21	
Low (10 to 15 score)	14 (66.67)	10 (45.45)	24 (55.81)
Medium (16 to 21 score)	7 (33.33)	9 (40.91)	16 (37.21)
High (22 to 27 score)	0 (0)	3 (13.64)	3 (6.98)
Mean \pm S.D.	15.38 \pm 3.01	16.77 \pm 4.15	16.09 \pm 3.66

*Figures in parentheses indicate percentage

Item Wise Mean Constraints Score Perceived by Trainers

Data presented in Table 3 clearly indicates that unwillingness of trainees to attend on-campus training was the most perceived constraint with mean score 2.023 by trainers, followed by no follow-up of training (1.860), lack of transport facility for carrying trainees (1.791), un-favourable attitude of trainees towards new technologies (1.791) etc. The findings of the study commensurate with Meena *et al.* (2013) and Kumar (2004), who had reported similar observations during a study conducted in Rajasthan. While, Ramakrishnan (2013) reported that the major problems were the lack of suitable infrastructure for conducting training, lack of development of instructional farms and inadequate stipend amount for trainees.

Across both types of KVKs, trainers faced more or less similar problems but they slightly differed in their preference to concerned constraints. Trainers from SAU-KVKs were perceived 'unwillingness amongst the trainees to attend on-campus trainings' as major (2.095) constraint, followed by 'no follow-up of trainings due to various works' (1.857), 'lack or inadequate facilities for conducting practical during training' (1.619), 'lack of contingency for critical input of trainings' (1.619) as the most important hurdles in organization of training. While, 'lack of transport facility for carrying trainees' and 'unfavourable attitude of trainees towards new technologies' with each mean score 2.045, followed by 'unwillingness of trainees to attend the on-campus trainings' (1.955) and 'no follow-up of trainings' (1.864) were considered as the most important constraints in organization of farmers' trainings by the trainers of NGO-KVKs. Further analysis of Table 3 indicates that there were remarkable differences in perceived constraints amongst

trainers of SAU and NGO-KVKs regarding facilities to conduct practical, transport facility, incentives for extra work, and farmers' unfavourable attitude.

Table 3: Distributions of trainers according to their perceived mean constraint score regarding organization of training

S. No.	Constraint Items in Training Organization	Mean Score Value	Mean Score Value	Pooled	X ² value
		SAU-KVK (n=21)	NGO-KVK (n=22)	Mean Score Value (n=43)	
1	Trainees are not ready to come for on-campus trainings	2.095	1.955	2.023	0.627
2	Lack of transport facility for carrying trainees to on-campus trainings	1.524	2.045	1.791	9.400*
3	Lack/inadequate facilities for conducting practical trainings	1.619	1.273	1.442	3.964
4	Poor maintenance of instructional farm	1.381	1.273	1.326	1.111
5	Non-availability of teaching materials	1.143	1.182	1.163	1.204
6	Non incentives for extra work	1.286	1.773	1.535	5.194
7	Lack of contingency/fund for critical input of trainings	1.619	1.773	1.698	0.42
8	Un-favourable attitude of trainees towards new technologies	1.524	2.045	1.791	6.001
9	No follow up of trainings due to various works	1.857	1.864	1.86	0.024
10	Lack of cooperation from higher authorities	1.333	1.591	1.465	3.905
	Overall Constraint Level	15.381	16.774	16.094	16.986

*Significant at 5% level

These findings supported by Singh *et al.* (2013) and found that lack of professional growth in the organization; no sufficient practical facilities for imparting training; poor infrastructural facility; lack of promotional opportunities; illiteracy prevailing in the village and irregular supply of inputs as the major constraints. The findings are in line with Kumar (2004), who reported that the most perceived constraints by the trainers in SAU-KVK were “lack of motivation in the trainees” and “inadequate feedback system”, while for the trainers of NGO-KVKs “lack of promotional opportunities” was the most perceived problems. On one side, the results emphasized provision of required facilities to trainers and at other side better utilization of their extension skill in changing farmers' attitude for maximum participation and effective organization of trainings. The data further depicts that there were no significant difference between overall and all other perceived constraints regarding training organization except ‘lack of transport facilities for carrying trainees for on-campus trainings ($p < 0.05$)’.

Suggestions by the KVK Trainers

The suggestions provided by trainers for effective remedy of the constraints they perceived in organization of training, based upon their preference were analyzed and presented in Table 4. “Need based, practical and skill oriented trainings” has received first rank. It is logical also that training programme would not be so

effective, until it is not based upon farmers' need. The second suggestion made by the trainers was "the development of infrastructural facilities at KVK". Further, they suggested "emphasis on more off-campus training" (III rank), with intent to reach more farmers. It might be due to the less preference of potential and needy farmers to participate in on-campus training. All the suggestions listed in the Table 4 are important and require immediate attention of their controlling institutes on priority basis. Meena *et al.* (2013) reported important suggestions *viz.* "the development of infrastructural facilities", "need based, practical and skill oriented trainings", "field visit and tours" as the first, second and third ranked suggestions, respectively. Trainers from both streams opined similar suggestions for further improvement in training organization with few slight differences in priority. Trainers from NGO-KVKs ranked suggestions comparatively at higher position to "transport facility to bring farmers", "development of infrastructural facilities at KVKs", "provision of inputs along with training to farmers", "provision of all facilities to respective trainers" than respondents from SAU-KVKs. However, SAU-KVK trainers preferably suggested "full-fledged technical staff", "training on single component at a time", "field visit and tours" with priority in rank than trainers of NGO-KVKs.

Table 4: Suggestions by the trainers for further improvement in training of KVK

S. No.	Statements	SAU=KVK (n=21)		NGO-KVK (n=22)		Pooled N=43	
		MSV*	Rank	MSV*	Rank	MSV*	Rank
1	All required infrastructural facilities should be developed at KVKs.	78.95	3	82.14	2	73.3	2
2	KVK trainings should be more need based, practical and skill oriented.	82.81	1	82.41	1	75.86	1
3	Field visit and tours should be a part of KVK training programmes.	76.29	5	74.73	6	67	5
4	KVK should provide transport facility to bring farmers.	70.62	10	74.77	5	63.23	10
5	It should be proper to provide inputs along with training to farmers on pilot basis.	73.24	9	73	8	63.98	8
6	KVK training should be given on one single component at a time.	74.86	7	71.36	10	63.95	9
7	KVK trainers must have knowledge on latest technology for effective training.	76.67	4	75.41	4	67.51	4
8	KVK should provide all facilities to respective trainers.	74.67	8	73.91	7	65.4	7
9	KVK must have full-fledged technical staff.	76	6	72.91	9	65.53	6
10	Emphasis should be more on off-campus trainings to reach more farmers	79.9	2	76.36	3	70.23	3

*MSV- Mean score value

Conclusion

The study has clearly elucidated the profile of the trainers of KVKs of Maharashtra that majority of the trainers has middle to young age with low service experience, education up to master degree from varied



disciplines, that emphasized the need of proper training to upgrade their extension skill, so that they could be able to motivate farmers to participate in on-campus training, change farmers' attitude towards new technologies and ensure team support to follow up of training. It also emphasized due attention of host institutes in provision of critical inputs assistance to overcome perceived constraints. The suggestions provided by trainers are very rational, which need to be followed preferably on priority basis to facilitate effective learning for trainees.

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