RESEARCH NOTE

Determinants and Constraints Affecting Training Effectiveness for Enhancing Core Competencies of Extension Personnel: An Analytical Study in Kerala

S. Aiswarya[1], Monika Wason[2], R.N. Padaria[3], D.U.M. Rao[4], R. Gills[5], Priti Priyadarshini[6] and Bishal Gurung[7]

1&6. Ph.D Scholar, 2,3&4. Pr. Scientist, Division of Agricultural Extension, IARI, New Delhi,
5. Scientist, CMFRI, Cochin, 7. Scientist, IASRI, New Delhi

Corresponding author e-mail : aishuambady@gmail.com

ABSTRACT

Training is the furthermost investment in building human resources. An attempt was made to study the determinants and constraints affecting for enhancing core competencies of extension personnel in Kerala. Three training institutions: Community Agrobiodiversity Center (under an NGO), SAMETI (under State Department) and CTI (under SAU) were chosen for the study. Purposive and Random Sampling were carried out for the study. The sample consisted of trainers from three different training institutes. Four different training programmes related to core competency development being organized during 2017-18 were selected purposively from each of the three training institutes. Five trainees for each training programmes were selected randomly with a sample size of twenty from each institute making sixty as total sample size. Personal interview and focus group discussion methods were also used as tools for data collection. Ten factors were listed based on the review of literature and consultation with experts that were thought to affect the effectiveness of training. Tobit regression was used to identify the factors affecting the effectiveness of training. Three factors were found to affect the effectiveness of training according to trainers that were locus of control, improvement in job performance and satisfaction and training need index.

***Key words**: Core Competencies; Training; Effectiveness; Tobit Regression; Locus of control; Training need index*

The changing demography of farming communities, advancing technologies, increase in competition for resources and expansion of globalization concepts through the boundaries of different nation warrant a shift in the extension paradigm to a demand-driven, participatory and pluralistic form. These shifts expected to be in extension paradigm requires human resources competent in activities, process and technical skills in the agricultural education, extension and field level activities to help the farming communities to develop themselves. As training is increasingly being recognized as a major tool in developing competencies and to improve performance in various fields, trainers at micro and macro level have been investing time and effort in exploring ways and means to improve its delivery.

Training is considered as the process of acquiring specific skills to perform a job better. It helps people to become qualified and proficient in doing some jobs as compared with the earlier situation (*Dahama, 1979). Kirkpatrick (1993)* suggested that much thought and emphasis needs to be given in designing trainings to make sure that the programmes are effective and relevant. Efficient extension personnel should remain updated with emerging technologies, be able to handle challenges, tap opportunities and demonstrate competency in their services.

They need to possess a set of core competencies i.e., collective organizational skills upon which the organization bases its primary operation or services.

Athey and Orth (1999) defined core competencies as collection of observable dimensions like individual skills, knowledge, attitudes, behaviours, and collective processes and capabilities, necessary for individual, organizational and program success. An Extension worker's performance is a function of his/her knowledge plus skills and attitudes. Hence, extension professionals should not be judged solely on how knowledgeable they are in their technical subject area of expertise, but it should be on the basis of how skilful and able they are in delivering services to their clients. It should also be noted that core competency needs are contextual and extension workers' contexts affect their competency needs and competency levels. Davis et.al (2014) ascertained that most of the trainings were not properly conducted, monitored and evaluated. According to Dayal (2001) the chief concern is that the trainer has to be unambiguous about the training objectives and training methodology. Hence, a systematic analysis of the training efforts, training effectiveness, job performance and factors determining its effectiveness which is in terms of enhanced technical and process skills needs to be done through a research investigation. In this context, the present investigation have been carried out to address the following objective of assessing the factors affecting training effectiveness and constraints of training programmes as perceived by the trainers.

METHODOLOGY

The study was conducted purposively in the state of Kerala. Report by Human Development Index and extension worker to farmer ratio in Kerala is 1:300 (Sulaiman, 2012) indicated that Kerala is comparatively superior in position in comparison with other states. Three training institutions: Community Agrobiodiversity Center (under an NGO), SAMETI (under State Department) and CTI (under State Agricultural University) were chosen for the study. The sample consisted of trainers from the three different training institutes. Four different training programmes related to core competency development being organized during 2017-18 were selected purposively from each of the three training institutes. For each training programme, sample of 5 trainers were selected, totalling about 20 trainers for four training programmes

from each training institute. Thus, the total sample size for the study was 60. In order to determine the factors affecting training effectiveness, ten factors were listed based on the review of literature and consultation with experts that were thought to affect the effectiveness of training. Tobit regression was used to identify the factors affecting the effectiveness of training. The Tobit model is a statistical model proposed by James Tobin to describe a non- negative dependable variable and an independent variable. Beta coefficient represents the relationship between independent variable and latent variable.

Constraints perceived by the trainees in the effective implementation of the program were identified by administering a semi-structured interview schedule and questionnaire. Data were collected by personal interview of the trainers, questionnaire and focused group discussions. Both primary and secondary data were utilized for the study. Constraints were ranked based on mean rank obtained for each constraints using Friedman test. Friedman test was used to determine severity of the constraints by using mean rank. In this study, the test statistics used in case of Friedman test is chi-square test.

RESULTS AND DISCUSSION

In the present investigation, an attempt has been made to study the determinants of training effectiveness as perceived by trainers of the three institutes. Ten factors were listed based on the review of literature and consultation with experts that were thought to affect the effectiveness of training. Tobit regression was used to identify the factors affecting the effectiveness of training. The Tobit model is a statistical model proposed by James Tobin to describe a non-negative dependable variable and an independent variable. Beta coefficient represents the relationship between independent variable and latent variable.

Two factors (Table 1) were found to affect the effectiveness of training according to trainers that were locus of control and training need index. Beta coefficient for locus of control (0.325) showed that it affects the effectiveness of training positively, whereas training need index (- 0.0521) was found to affect effectiveness of training negatively. Locus of control is the extent to which people deem that they have command over the effect of events in their lives, as opposed to external forces beyond their control. Effort should be taken by the trainers to develop

Table 1. Factors affecting effectiveness of training according to the perception of trainers

Factors	t-value	Beta coefficient	p-value
Age	53.394	- 0.00219	0.899
Experience	13.907	0.0260	0.205
No. of trainings attended	7.467	- 0.000206	0.846
Self confidence	32.257	0.0129	0.935
Locus of control	21.00	0.325	0.004
Attitude towards subject matter	44.352	- 0.0341	0.862
Attitude towards trainer	50.204	0.352	0.266
Job performance and satisfaction	63.835	0.335	0.000
Relevancy	31.690	0.104	0.401
Training need index	24.867	- 0.0521	0.031

Table 2. Personal constraints faced by the trainers

Personal Constraints	CAbC Mean Rank	Rank	CTI Mean Rank	Rank	SAMETI Mean Rank	Rank
Lack of confidence	2.55	5	2.00	6	2.82	6
Fear of handling ICTS	5.40	1	4.92	1	4.80	1
Lack of experience	2.60	4	3.02	4	2.86	5
Financial problems	3.85	3	4.35	2	3.15	3
Lack of motivation	1.92	6	2.48	5	2.89	4
Poor health	4.68	2	4.22	3	4.65	2

Table 3. Personal constraints faced by the trainers

	CAbC	CTI	SAMETI
N	20	20	20
Chi-Square	64.96	49.76	53.86
df	5	5	5
Asymp. Sig.	.001	.001	.001

internal locus of control. People with an internal locus of control have a high logic of primary control, believing that they strongly influence most of the events and outcomes in their lives. They also have a high sense of secondary control, they even have the skills and resources to respond positively, cope and bounce back. Improvement in job performance and satisfaction was also found to be one of the important factors affecting training effectiveness, as the ultimate aim of training is enhancement of job performance of trainees in their work organization and thereby job satisfaction is gained from their working organization. Training need is the perceived difference between what is and what should be in terms of knowledge, core competency skills and attitudes so that the extension personnel need to perform their roles more effectively in their work organizations. Trainer's training should be conducted regularly to fill the training need of trainers. Only an effective training can fill the existing training need. Findings were well supported by *Yaqoot*

et al. (2017), *Fischer (2011)* and *Driskell (2011)*

Constraints were categorised into personal, organisational, social and economic constraints. The data has been presented under the following four heads.

Personal constraints faced by the trainers: Personal constraints were the perceived psychological difficulties faced by respondents as a trainer. Seven different constraints were identified *viz.* lack of confidence, fear of handling ICTs, lack of experience, financial problems, lack of motivation, and poor health. Responses were collected on the basis of their severity. The results are presented in Table 2.

Among the personal constraints (Table 2), the fear of handling ICTs was the most severe constraint as perceived by the trainers of CTI, CAbC and SAMETI, so it was ranked first with the highest mean ranks. It indicates that the training of trainers in handling of ICT's is the need of the hour. Lack of confidence was found to be the least severe one with the lowest mean ranks in case of CTI and SAMETI but in case of CAbC lowest rank is for lack of motivation.

The Friedman test revealed that all the personal constraints were identified clearly and they differed significantly from each other (Table 3).

Organizational constraints faced by the trainers : In case of all the three institutes, six different constraints were listed *viz.* poor management, Improper training hall, poor library facilities, Poor usage of audio visual aids, Lack of field visits and demonstrations, Poor training institute facilities. Responses were collected on the bases of their severity. Results are presented in Table 4

Among the enlisted constraints relating to

Table 4. Organizational constraints faced by the trainers

Organisational Constraints	CABC Mean Rank	Rank	CTI Mean Rank	Rank	SAMETI Mean Rank	Rank
Poor management	3.60	3	3.48	3	2.40	5
Improper training hall	2.58	4	3.30	4	2.72	4
Poor library facility	4.12	2	3.70	2	5.48	2
Poor usage of AV aids	2.52	5	2.68	6	2.10	6
Lack of field visits and demonstrations	5.98	1	4.80	1	5.45	1
Poor training institute facilities	2.20	6	3.05	5	2.85	3

organizational constraints in (Table 4). "Lack of Field visits and demonstrations" were not conducted regularly was the most severe constraint as perceived by the trainers of CTI, CAbC and SAMETI, so it was ranked first with highest mean score in the three institutes. It indicates that the training programmes conducted should include regular field visits and demonstrations to encourage practical experience. "Poor usage of Audio-visual aids" was found to be the least severe one with the lowest mean in CTI and SAMETI. "Lack of Training institute facilities" was found to be the least severe constraint as reflected by the lowest mean ranks in CAbC.

The Friedman test revealed that all the organizational constraints differed significantly (P<0.001) with each other in case of all the three institutes. It shows that the respondents distinctively identified the organizational constraints (Table 5).

Economic constraints faced by the trainers : Economic constraints were the financial difficulties faced by the respondents as a trainer. Three different constraints were listed *viz* lack of fund, insufficient training budget, and non-payment of TA. Responses were collected on the bases of their severity. Results are presented in Table 6.

Non-payment of TA, lack of fund was the most severe constraint as perceived by the trainers of CTI and CAbC. Whereas travelling allowances not paid was the most severe constraint as perceived by the trainers of SAMETI (Table 6).

The details of Friedman test for economic constraints are given in Table 7. Accordingly, the constraints have been ranked. All the economic constraints were significantly different from each other in all the three institutes.

Social constraints faced by the trainers : Social constraints were the social difficulties faced by the respondents as a trainer. Four different constraints were listed *viz.* lack of faith in training programme, belief in traditional system, difficulty in adjusting with heterogeneous groups, and family problems. Responses were collected on the bases of their severity. Results are presented in Table 8. Among the enlisted constraints relating to social constraints in Table 8 difficulty in adjusting with heterogeneous groups was the most severe constraint as perceived by the trainers of CTI, CAbC and SAMETI, so it was ranked first with highest mean scores followed by lack of faith in training programmes. The test

Table 5. Organizational constraints faced by the trainers

	CAbC	CTI	SAMETI
N	20	20	20
Chi-Square	74.10	25.89	85.43
df	5	5	5
Asymp. Sig.	.001	.001	.001

Table 6. Economic constraints faced by the trainers

Economic Constraints	CABC		CTI		SAMETI	
	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Lack of fund	2.70	1	2.68	1	1.28	3
Insufficient training budget	2.30	2	2.32	2	1.78	2
TA was not paid	1.00	3	1.00	3	2.95	1

Table 7. Results of Friedman test for economic constraints

	CAbC	CTI	SAMETI
N	20	20	20
Chi-Square	35.11	34.21	33.80
df	2	2	2
Asymp. Sig.	.001	.001	.001

Table 8. Social constraints faced by the trainers

Social Constraints	CABC		CTI		SAMETI	
	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Lack of faith in training programme	2.42	2	2.12	2	1.88	4
Belief in traditional system	1.82	3	1.78	4	2.68	2
Difficulty in adjusting with heterogeneous groups	4.00	1	4.00	1	3.05	1
Family problems	1.75	4	2.10	3	2.40	3

Table 9. Results of Friedman test for social constraints

	CAbC	CTI	SAMETI
N	20	20	20
Chi-Square	48.50	48.89	13.75
df	3	3	3
Asymp. Sig.	.001	.001	<0.01

statistics values obtained for the three institutes with level of significance of <0.01 amply shows that all the social constraints differed significantly from each other in case of all the three institutes.

Constraints faced by the trainers : Table 10 shows overall ranking for all five different constraints *viz* personal, organizational, economic, social and other constraints.

197

Social constraint was the most severe constraint perceived by the trainers of CAbC, CTI and SAMETI, so it was ranked first with the highest mean score. The Friedman test showed that the constraints differed significantly (p<0.001) with each other (Table 11).

Many impediments and hindrances were encountered by trainers while implementing the training program. Hence, it is essential to identify and manage these constraints so as to keep them below the threshold level. Findings were well supported by *Sharma (2004), Mahendra & Khan (2007)*.

CONCLUSION

Training of extension personnel is an essential part of agricultural development. Trained personnel are a way and end towards social change. It is the need of the hour to identify the factors affecting the effectiveness and to manage the constraints for effective implementation of training programmes. Social constraints were the most severe constraints as perceived by the trainers of CAbC, CTI and SAMETI. The main purpose of the training programme should be to motivate the trainers to learn something to improve the job performance. Training should be need based and trainers input are vital for making the next session and to make the overall training program more effective.

Table 10. Constraints faced by the trainers

Constraints	CABC		CTI		SAMETI	
	Mean Rank	Rank	Mean Rank	Rank	Mean rank	Rank
Personal constraints	2.80	2	2.80	2	1.95	4
Organizational constraints	2.38	4	2.38	3	3.70	2
Economic constraints	2.78	3	2.78	4	2.32	3
Social constraints	5.00	1	5.00	1	4.72	1

Table 11. Friedman test for constraints faced by the trainers

	CAbC	CTI	SAMETI
N	20	20	20
Chi-Square	44.86	44.86	46.06
df	4	4	4
Asymp. Sig.	.001	.001	.001

CONFLICTS OF INTEREST

The authors have no conflicts of interest.

REFERENCES

Athey, T.R. and Orth. M.S. (1999). Emerging competency methods for the future. *Human Resou. Mgt.*, **38** (3) : 215-225.

Dahama, O.P. (1979). Extension and Rural Welfare. Ram Prasad and Sons, New Delhi, India.

Davis, K. and Sulaiman. R. (2014). The new extensionist: Roles and capacities to strengthen extension and advisory services. *J. of IntL. Agri. and Ext. Edu.*, **21** (3). doi:10.5191/jiaee.2014.21301.

Dayal, Ishwar. (2001). Measuring training effectiveness, *Indian J.of Indus. Relations*, **36** (3) : 339-344.

Driskell, James, E. (2011). Effectiveness of deception detection training: A meta-analysis. *Psycho., Crime & Law*, **10** : 1-19. DOI: 10.1080/1068316X.2010.535820

Fischer, R. (2011). Cross-cultural training effects on cultural essentialism beliefs and cultural intelligence, *Intl.J. Intercul. Relations,* **35** (6) : 767-775.

Kirkpatrick, D.L. (1993). How to train and develop supervisors. NY: AMACOM. Klatt, A.L., Murdick, G.R. and Schuster, F.E. (1985). Human resource management. Columbus, Ohio: Charles E. Merrill Publishing Co.

Mahendra, Kumar and Khan, I.M. (2007). Constraints faced by trainers of KVK's run by different agencies in Rajasthan. *Indian J. Social Res.*, **47** (1) : 45-50.

Sharma, K.K. (2004). Training management in Krishi KVK's of Himachal Pradesh. Ph.D Thesis. Acharya N.G. Agricultural University, Hyderabad, India.

Sulaiman, R. (2012). Agricultural extension in India: Current status and ways forward. Centre for Research on Innovation and Science Policy (CRISP). Background paper to the Beijing Syngenta Roundtable on extension in Asian countries, 2012. Hyderabad, India

Yaqoot, E.S., Wan Mohd Noor, W.S. and Mohd Isa, M.F. (2017). Factors Influencing training effectiveness: Evidence from public sector in Bahrain. *Acta Universitatis Danubius. Œconomica*, **13** (2).

● ● ● ● ●