Training Impact Assessment: Evaluating PAMETI's Programs for Punjab's Extension Personnel

ABSTRACT

The study entitled " Training Impact Assessment: Evaluating PAMETI's Programs for Punjab's Extension Personnel " was undertaken with the objective of finding the level of effectiveness of the training programmes for extension personnel. The sample consists of trainees from various competency development training programmes organised by Punjab Agricultural Management and Extension Training Institute (PAMETI) in 2017–2018. In total 5 trainings and 24 trainees from each trainings were selected by purposive and random sampling respectively. Thus, a sample of 120 trainees from PAMETI, Ludhiana were taken for the study. Most of the trainees belonged to the high category of ‘applicability and utility’, ‘knowledge, attitude and skill’ and conviction of the training programmes whereas most belonged to medium category of relevance, timeliness and ‘improvement in job performance and satisfaction’ of training programmes. It was found that average training effectiveness index is highest for applicability and utility of the training programmes whereas lowest for job performance and satisfaction. Most of the trainees perceived to lie in the medium category of the overall training effectiveness index followed by high and low category.

KEYWORDS

Training effectiveness, Training programmes, Extension personnel, PAMETI

INTRODUCTION

An essential link among research, organisations, and farmers is provided by extension personnel. As the agricultural sectors undergo changes in environmental trends, the significance of information and knowledge as essential factors of production has grown. Ensuring the efficient distribution of information related to crop production, extension services, plant protection, and general agriculture is crucial for expanding the accessibility of demand-driven services and enhancing the overall quality of service provision. (Babu et al., 2021). In order to provide clients with good service, extension workers must regularly upgrade their skills and knowledge. Therefore, the extension service should ensure that extension staff receive regular and appropriate training opportunities. The process of providing training which is considered essential for quick transfer of technologies (Jaiswal et al., 2019) plays a crucial role in developing skills and expertise. Training can be seen as the systematic arrangement of opportunities for individuals to gain the required knowledge and skill (Lynton & Pareek, 1990). To address the evolving problems and challenges, it is crucial for relevant institutions to organize more specialized and adaptable training programs for extension personnel. The responsibility of organizing training programs for extension staff lies with State Agricultural Universities, as well as Central and other regional institutes. (Anonymous, 2003). Hence, increasing the capacity of the extension personnel through effective training programmes has become a key component of the agricultural development plan. Training is the systematic process of changing knowledge, behaviour, skill and motivates the employee to improve their performance on the job as per the goal and objective of the organization (Bhatnagar, 1987).

Therefore, each state approved to operate a single State Agricultural Management and Extension Training Institute (SAMETI) in order to improve the skill of extension staff. In the

case of Punjab, it is referred to as PAMETI. For the purpose of improving the knowledge, attitude, and abilities of extension workers PAMETI offers a variety of training programmes. Training effectiveness is defined as the extent to which a training program achieves its intended goals, such as the desired improvements in knowledge, skills, and attitudes. However, many training programs are implemented without proper assessment of training needs, leading to a waste of human and material resources invested in training. (ArunKumar et al., 2021and Warris, 2015). A training programme is effective if it accomplishes its objectives, such as determining whether the desired changes in skills, attitudes, and knowledge took place. (Haneef et al., 2020). However, no systematic efforts are available to analyse the training efforts and training effectiveness of PAMETI for extension personnel. This study envisions providing information on training need, content development, duration and methodologies need to be followed in determining effective training for extension personnel and providing data for policy-makers, organisations for designing and conducting the efficient training programme.

METHODOLOGY

In this study, an ex-post facto design, also known as after-the-fact research, was employed. As described by Kerlinger, (1964), ex-post facto research is a methodical empirical investigation in which the researchers do not have direct control over the independent variables. This is either because the variables' occurrences have already taken place or because they are inherently unchangeable or non-manipulable.

The respondents were selected using both purposive and random sampling method. The sample consists of trainees from various competency development training programmes organised by PAMETI in 2017-2018. Selection of both the training programmes and trainers

were done by purposive sampling. Five training programmes and 6 trainers were selected for the study. Purposive sampling was used, which is defined as the deliberate selection of informants based on their capacity to illuminate a particular theme, concept or phenomenon (Robinson, 2014). Another sampling technique was simple random sampling which involves choosing a subset of the population at random with an equal chance of selecting each member of the population (Thomas, 2020). The sample consisted of 24 trainees from each of the five training programs, and the selection was done randomly from a list obtained from PAMETI. For this study, a total of 120 trainees from the Punjab Agricultural Management and Extension Training Institute (PAMETI), affiliated with Punjab Agricultural University (PAU) in Ludhiana, were included in the final data collection.

Training effectiveness was operationalized as the degree to which the trainees are satisfied with the delivery and degree to which there is desirable changes in terms of knowledge gain, improvement in core competency, skills and change in attitude towards the job are reflected in job performance of trainees based on their perception. The assessment of training effectiveness utilized a five-point continuum, where participants could indicate their level of agreement or disagreement. The participants' responses spanned from "strongly agree" to "strongly disagree," with scores ranging from 5 to 1, respectively. The training effectiveness index was utilized to assess the overall efficacy of the training program. (Aiswarya, 2018).

Computation of Training Effectiveness Index

Each parameter of Training Effectiveness Index comprised of multiple indicators and consequently, their total score ranges varied. As a result, using simple range and variance, the total score of each parameter was converted into a unit score, as shown below,

$$U_{ij} = \frac{Y_{ij} - Min\,Y_{ij}}{Max\,Y_j - Min\,Y_j}$$

Where,

U_{ij} = Unit score of the i^{th} trainee on j^{th} parameter

Y_{ij} = Value of the i^{th} trainee on the j^{th} parameter

Max Y_j = Maximum score on the j^{th} parameter

Min Y_j = Minimum score on the j^{th} parameter

Thus, the index score of each parameter ranges from 0 to 1, i.e. when Yij is zero, the score is zero, and when Yij is one, the score is one

The total index score of all the indicators was used to determine the trainees' status. The range method was used to categorise trainees into low, medium and high categories. The range was calculated by subtracting the lowest score from the highest score and then dividing it by 3.

RESULTS AND DISCUSSION

Training Effectiveness Index of the trainees

In the present study, an index was used consists of six parameters to measure the trainees' perceptions of the training's effectiveness i.e. applicability and utility, timeliness, relevance, improvement in knowledge, skill and attitude, conviction, improvement in job performance and satisfaction. The frequency distribution of the trainees on these six parameters is depicted in table 1.

1. **Applicability and utility**

The data in Table 1 indicates that the majority (51.67%) of trainees found the training programs conducted by PAMETI had high applicability and utility, followed by 40% in the moderate category and 8.33% in the low category. These findings are consistent with those of Aishwarya et al. (2019) who found that majority (70%) of the trainees found the training programs conducted by SAMETI had high applicability and utility.

2. **Relevance**

As shown in Table 1, most trainees (60%) perceived the training programs to be moderately relevant, with 33.33% rating them as highly relevant, and 7.50% considering them to be of low relevance.

3. **Timeliness**

The data in Table 1 indicates that the majority of trainees (64.17%) perceived the training programs to be moderately timely, with 28.33% rating them as highly timely, and 7.50% considering them to be untimely.

4. **Knowledge, Attitude, and Skill**

According to Table 1, the majority of trainees (40.83%) rated the training programs as highly effective in improving knowledge, attitude, and skills, with 36.67% rating them as moderately effective, and 22.59% perceiving them to be less effective.

5. **Conviction**

Table 1 shows that most trainees (47.50%) reported a high level of conviction in the training programs, with 38.33% indicating a moderate level of confidence, and 14.17%

expressing low confidence.

6. Improvement in Job Performance and Satisfaction

The data in Table 1 reveals that the majority of trainees (42.50%) perceived a moderate improvement in job performance and satisfaction, with 40.00% reporting a high level of improvement, and 17.50% indicating a low level of improvement.

From the table 1 it can be depicted that training helped the trainees to apply their learning in field condition and found the training to be very useful. Moreover, trainees found the trainings relevant, though some found them irrelevant citing a mismatch between nominations of the trainees and the training needs assessed. Trainees also said that the trainers were in time in providing lectures and trainings were also completed in right time. The trainings offered thus helped to increase the knowledge, attitude and skill of trainees. Training courses were deemed convincing as per the trainees' assessment. The training sessions provided a platform for thorough discussion on the subject matter which led to increase in conviction. The training imparted knowledge and skills to the trainees which led to enhancement of job performance of the extension personnel, and indirectly contributed to satisfaction.

Table 1 Distribution of trainees according to different parameters to measure training effectiveness

Slr. No.	Parameters	Categories	Frequency (n = 120)*	Percentage
1.	Applicability and utility	Low (13-15)	10	8.33
		Medium (16-18)	48	40.00

		High (19-21)	62	51.67
2.	Relevance	Low (15-16)	9	7.50
		Medium (17-18)	72	60.00
		High (19-20)	39	33.33
3.	Timeliness	Low (10-11)	9	7.50
		Medium (12-13)	77	64.17
		High (14-15)	34	28.33
4.	Knowledge, Attitude and skill	Low (10-11)	27	22.50
		Medium (12-13)	44	36.67
		High (14-15)	49	40.83
5.	Conviction	Low (10-11)	17	14.17
		Medium (12-13)	46	38.33
		High (14-15)	57	47.50
6.	Improvement in job performance and satisfaction	Low (10-11)	21	17.50
		Medium (12-13)	51	42.50
		High (14-15)	48	40.00

*Multiple responses

Average Training Effectiveness Index of different parameters

Data given in table 2 indicate the average Training Effectiveness Index of the six parameters. Applicability and utility was found to be with highest training effectiveness index i.e. 0.88 followed by relevance with 0.86, knowledge attitude and skill with 0.84, conviction with 0.83, timeliness with 0.82 and job performance and satisfaction with 0.81.

Table 2 Average training effectiveness index of different parameters

Parameters	**TEI**

Applicability and utility	0.88
Relevance	0.86
Timeliness	0.82
Knowledge, attitude and skill	0.84
Conviction	0.83
Improvement in job performance and satisfaction	0.81

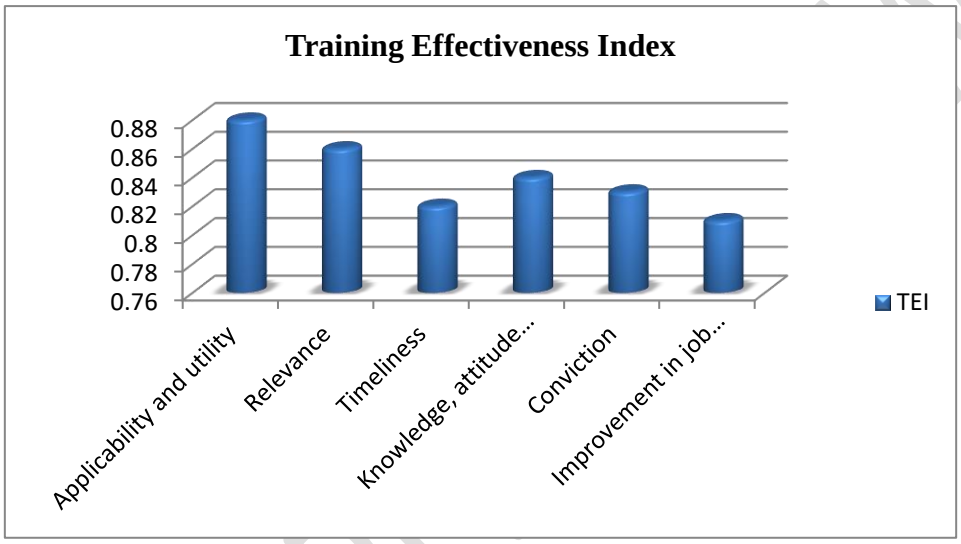

Fig 1 Average training effectiveness index of different parameters

Overall Training Effectiveness Index

Data pertaining in table 3 depict the overall Training Effectiveness Index of the trainees. Nearly 60 per cent of the trainees were found to lie in medium category of overall Training Effectiveness Index followed by 29.16 per cent in high category and 11.67 per cent in low category. Training need is crucial prior to initiating training, as it helps identify trainees who may not require further instruction due to their existing knowledge and practical experience across various fields. If someone found the training not important, he or she would gradually lose interest in the same. Sometimes overburden of work or clash of any important works may could also hinder the process of acquiring knowledge from training. Thus, all these

factors sometimes decrease the effectiveness of training. These findings are similar with the findings of Lambe (2000) and Ebrahim, S. N., & Girija, V. (2020).

Table 3 Distribution of trainees according to overall training effectiveness index

(n=120)

Categories	Frequency	Percentage
Low (0.76-0.81)	14	11.67
Medium (0.82-0.87)	71	59.17
High (0.88-0.93)	35	29.16

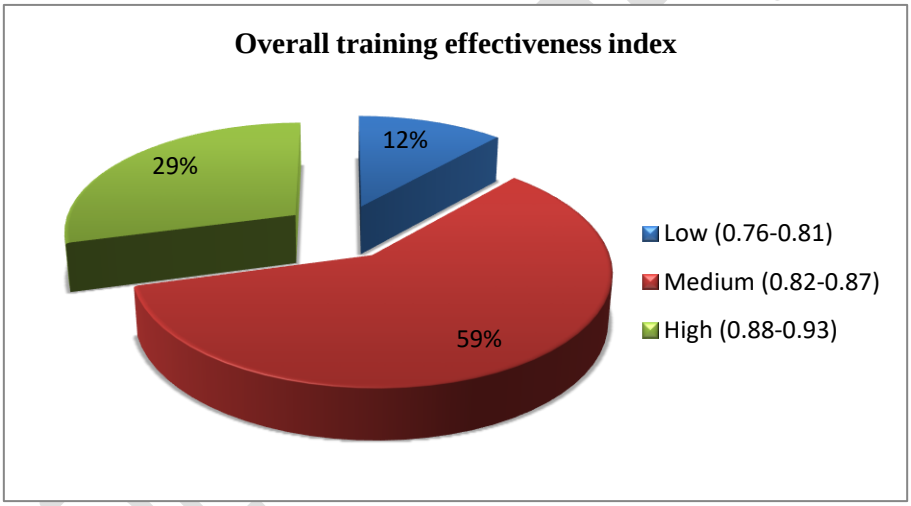

Fig 2 Distribution of trainees according to overall training effectiveness index

CONCLUSION

From the study it can be concluded that training helped the trainees to apply their learning in field condition and found the training very useful. Moreover, most of the trainees found the trainings relevant and convincing. Trainings were completed in right time and helped to increase the knowledge, attitude and skill of trainees. Training imparted knowledge and skill to the trainees which led to enhance the job performance of the extension personnel

and indirectly contribute to satisfaction. Additionally, the research findings indicated that a majority of the extension personnel were perceived to fall within the moderate to high range of the overall training effectiveness index. Therefore, training programmes should be founded on an evaluation of what the target trainees need in order to make training more effective. It must be done strategically, taking into account issues like who needs to be trained, what they need to be trained in, and how the training process will be backed up and in accordance with strategic objectives.

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