



Analysis of training pattern and its impact on of employees' satisfaction

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Abstract

Survey was carried out for finding the training pattern followed in Armament Test and Evaluation Laboratory of Defence Research and Development Organization during the financial years 2011-12 to 2016-17 and their impact on satisfaction of trainees. Total 1334 employees were trained in 45 training courses conducted within the establishment while 542 employees were sent outside for getting useful training in 264 training courses. Among in-house training courses majority (55.6%) trainings were belonged to Technical type based on Armament Technology and Safety practices as related topics were very important for employees and other 44.4% training were on Management topics based on leadership and personal development conducted for its section heads and group leaders. Opposite trend was, however, recorded in case of outside courses. Management course got preference (52.3%) over Technical courses (47.7%) for taking the advantage of Management experts from Management Institutes. Training impacts on Trainees were found highly satisfactory, relevant and knowledge enhancer due to organizing different courses following well planned pattern.

Keywords: DRDO, management training, training impact, training pattern, technical training

1. Introduction

Training is not only crucial for employees for enhancing their skills, capabilities and required knowledge for doing successfully the particular job as well as improving their performance level, but beneficial also for development of the organization towards higher standard ^[1]. Educational qualification provides an opportunity for getting employment but training fills up the gaps between required skills and abilities to complete the work with confidence. Training plays important role in organization for updating knowledge on advancement of technology, essential for sustaining in situation of ever increasing competition as well as people's expectation on quality and service. Since skills erode and become obsolete over a period of time, their replenishment by training is utmost necessary at employees' level ^[2]. The moral of employees is improved automatically by training, which helps in better job security, job satisfaction and promotional chances. Trained employees require less supervision and commit fewer accidents in job. Blanchard and Thacker ^[3] clearly mentioned that learning through training depends on three important factors such as design of training, implementation of training and the learning climate of the organization. In the recent years many organizations have focused on becoming learning organization through knowledge and skill development trainings for their employees in order to stay competitive in the rapid changing environment of globalization ^[4]. Many organizations in India including Defence Research & Development Organization (DRDO) have mandated training hours per year for employees keeping in consideration the fact that technology is deskilling the employees at a very fast rate. Identification of training needs, development of training objectives & plans, implementation of planned training and evaluation of training are four important steps for any systematic Training model ^[5]. Training is, no doubt, a costly affair as all government, public, private and corporate sectors including DRDO spend a considerable amount of time and money on training of their

employees for improving job related competencies ^[6]. In DRDO different categories of employees ranging from engineers, scientists, administrators and other supported staff work together and it is, therefore, a great challenge for HR Coordinator of each DRDO laboratory to arrange different specialized training for achieving perfect satisfaction in upgrading skills among them. Sannigrahi ^[7] observed that proper training, arranged in time bound and need based manner, helped to reduce the requirement of training budget considerably without jeopardizing the training requirement of employees. According to Koot *et al.* ^[8] the post-modern era of globalization increased the aspect of complexity and uncertainty of relationships not only between different organizations but also between human capital within the organizations. In fact, this revolutionary change was due to the interference of socio cultural element which facilitated individualization and cultural diversity within the organizations. Shakeel *et al.* ^[9] found that the unstructured training pattern, where advice and knowledge seeking networks were dominant over friendly networks, encouraged the employees to have more of formal relations, while structured training pattern where friendly networks dominated the formal advice seeking or knowledge sharing networks, on the other hand, stimulated the employees to have more informal relations.

Proof & Experimental Establishment (PXE), the world-class dynamic Test & Evaluation center for armaments in DRDO is busy for test and evaluation of various weapons and ammunition either prepared by DRDO and Ordnance factories in India or procured from other countries at its Test Range during last 123 years for providing safe and efficient armaments to the braved Army and Navy soldiers guarding the borders of India from enemy. Similar to other laboratories of DRDO, employees at PXE are also trained through 'Induction training', 'Refresher training', 'On the job training' and 'Skill development training'. Employees were generally trained for skill development either through

Continuing Educational Program (CEP) carried out by DRDO Labs or through other training courses conducted externally by some specialized organizations [7]. Since the stability and progress of the organization always depends on the training imparted to the employees and design and implementation of training improve the quality and reduce the wastages, it was felt necessary to carry out a critical survey on training pattern followed at DRDO labs for bringing any change in training policy of the organization. This article dealt with the result of that study conducted for financial years of 2011-12 to 2016-17 on Training pattern followed at PXE as well as assessing its impact on the satisfaction levels of its trained employees.

2. Methodology

PXE plans every year some training courses for its employees on the basis of their training needs. Human Resource Development Division of DRDO HQ publishes every year one training calendar containing training schedules of all DRDO laboratories. PXE conducts training as per its training schedule. In-house CEP (3 or 5 days duration) or in-house other courses / workshops (1 or 2 days duration) are known as ‘Planned training courses’ for PXE while outside training courses are called as ‘Un-planned training courses’. A survey was carried out for collecting data like total course arranged for training to PXE employees, type of training courses, total employees trained every year, subject wise preferences for arranging in-house or outside courses, etc. from PXE for six

years from 2011-12 to 2016-17. The help of survey questionnaire and personal interview with trained employees were also taken to extract the information on their satisfaction and knowledge enhancement.

3. Result and Discussion

3.1 Training pattern followed at PXE

Total 29 CEPs and 16 others training course were conducted by PXE for its employees as planned training courses during last 6 financial years from 2011-12 to 2016-17, out of which 55.6% courses were of Technical nature (relevant to technical activities of PXE) and remaining 44.4% courses belonged to Management type (Table 1). Year 2014-15 onwards major emphasis was given on other courses having duration for 1 day only as compared to 5 days CEP courses. It was interesting to note that every year the number of un-planned training courses where PXE employees were deputed for training, were always more in numbers. This is obvious as training for employees was always decided on the basis of training need identification and in-house training courses were decided on the basis of availability of experts as well as necessity of training for more employees. During last six years employees were deputed for training in total 264 unplanned training courses (122 CEPs and 142 other courses), 47.7% belonged to Technical nature while 52.3% were of Management type. In un-planned training courses, help of more management institutes were taken for training to its employees.

Table 1: Training courses carried out for PXE employees during 2011-12 to 2016-17

Year	Planned Training Courses				Un-planned Training Courses			
	CEP	Others	Technical	Management	CEP	Others	Technical	Management
2011-12	8	0	6	2	26	40	33	33
2012-13	5	0	4	1	12	37	20	29
2013-14	6	0	3	3	29	19	21	27
2014-15	4	7	6	5	16	16	16	16
2015-16	1	5	3	3	18	17	15	20
2016-17	5	4	3	6	21	13	21	13
Total Courses (%)*	29	16	25 (55.6)	20 (44.4)	122	142	126(47.7)	138(52.3)

* Percentage of total number of courses

3.2 Category of courses conducted as CEP courses at PXE

Table 2 presents the critical analysis in categorizing different training courses conducted as in-house CEP under planned training courses. Majority of training courses (41.4%) conducted in six years was of Technical nature while Management related topics were 37.9% only. Being Armament Test and Evaluation lab almost equal emphasis was given on armament testing (20.7%) as well as safety practices related topics (20.7%). In case of Management courses more emphasis (31%) was given on personal

management like ‘Leadership development’, ‘Positive attitude & Team building’, ‘Interpersonal relationship’, and ‘Interpersonal communication’ vital for employees looking after managerial activities. Administrative courses were in less number as those were mainly for administrative employees whose number were less in comparison to employees of Technical groups. Computer related courses like asp.net, oracle, cyber security; information security etc. were grouped together as other courses.

Table 2: Categorization of in-house CEP courses conducted by PXE

Year	Technical courses		Management courses		Other courses	Total CEP courses
	Armament	Safety	Administration	HRM		
2011-12	2	2	1	1	2	8
2012-13	2	1	0	1	1	5
2013-14	1	1	0	3	1	6
2014-15	0	1	0	3	0	4
2015-16	0	0	0	0	1	1
2016-17	1	1	1	1	1	5
TOTAL	6 (20.7%)*	6 (20.7%)	2 (6.9%)	9 (31.0%)	6 (20.7%)	29

*Percentage of total in-house CEPs

The CEP courses attended by PXE employees at other DRDO labs were found about 41.8% on management topics followed by 32.8% other courses which included basic computers and its application, information security, computer advance network, software automation, IP structure, Mat- lab etc. (Table 3). Technical courses, on the other hand, were comparatively less, 19.7 % in Armament and 5.7% in Safety related topics which were obvious since availability of experts on these topics in labs other than DRDO were almost

nil. Since other armament labs of DRDO are working mainly on design and development of armaments some PXE employees were participated in those Armament related technical courses, which were also less in number. Less availability of management experts in lab itself and more availability of management experts in Management Institute have forced PXE authority to send its more employees outside for training on management topics.

Table 3: Categorization of CEP courses attended by PXE employees at other DRDO Labs

Year	Technical courses		Management courses		Other courses	Total CEP courses
	Armament	Safety	Administration	HRM		
2011-12	8	1	2	2	13	26
2012-13	4	2	2	1	3	12
2013-14	4	2	7	9	7	29
2014-15	3	1	0	3	0	4
2015-16	1	0	4	7	6	18
2016-17	4	1	3	5	8	21
Total	24(19.7%)*	7(5.7%)	23(18.8%)	28(23.0%)	40(32.8%)	122

*Percentage of total CEPs attended by PXE employees at other labs

3.3 Number of employees trained in different courses

The Table 4 and 5 showed that in six years total 1876 employees were trained. Since the employee strength of PXE is around 438, on an average, each employee got 4 or more trainings in last six year. The number of trained employees (1334 Nos.) in in-house training at PXE through planned training courses was found very high (2.46 times) as compared to those employees (542 Nos.) trained outside

through un-planned training courses. It was quite obvious as training conducted by the institute itself offered more scope to include more number of employees as trainees utilizing lesser expenditure. Deputing employees in external course outside PXE, on the contrary, creates more loss of working hour and caters more expenditure on trainees’ journey, accommodation and foods besides training cost.

Table 4: Employees trained through Planned Training Courses at PXE

Year	CEP	Others	Total	Technical	Management	Total
2011-12	139	0	139	113	26	139
2012-13	120	0	120	92	28	120
2013-14	107	0	107	55	52	107
2014-15	65	186	251	173	78	251
2015-16	18	135	153	65	88	153
2016-17	112	452	564	74	490	564
Total	561 (42.1%)	773 (57.9%)	1334	572 (42.9%)	762 (57.1%)	1334

* Percentage of trained employee

Table 5: Employees trained through un-planned training courses conducted by outside labs

Year	CEP	Others	Total	Technical	Management	Total
2011-12	61	62	123	61	62	123
2012-13	32	74	106	41	65	106
2013-14	76	35	111	56	55	111
2014-15	27	22	49	20	29	49
2015-16	46	37	83	36	47	83
2016-17	48	22	70	39	31	70
Total	290 (53.5%)	252 (46.5%)	542	253 (46.7%)	289 (53.3%)	542

* Percentage of trained employee

3.4 Satisfaction level of trainees

Table 6 depicted the feedback of 100 trainees collected using a questionnaire on ‘remembering the number of courses attended during this study period’, ‘relevancy of course with their activities’, ‘briefing of clear objectives of training considered for them before training’, ‘suitability of training methods followed’, ‘training duration’ and ‘knowledge enhancement’, etc. among employees including different cadres such as Scientists, Technical Officers, Technical Staff, Administrative staff and Allied workers. Ninety five percent trainees remembered all training courses attended in PXE or

outside while only five percent trainees could remember partially. Ninety two percent agreed that training courses attended by them were relevant while only eight percent trainees pointed towards non-relevancy of course with their present activities. Trainees for different course were usually selected on the basis of their training needs but sometimes sudden transfer of employees from one section to another section made the course irrelevant with present activities. Eighty seven percent trainees expressed about clear objectives of training courses while thirteen percent mentioned about partially clear about objectives indicating

their selection might be in last minute to fill the gap of absentees. Majority of trainees (90%) were participated in interaction during different trainings excepting only three percent non-interactive which might be due to their old age or introvert nature. Almost half of the trainees mentioned about inadequacy of training period which was obvious as switching from working mode to learning mode required

some more time for some people. All trainees agreed that different trainings enhanced their knowledge which proved that training pattern and methods were in right direction. Seventy five percent trainees were highly satisfied while twenty five percent trainees were partially satisfied which was obvious as everyone cannot be happy always in any program.

Table 6: Feedback of employees attended Trainings

Sl. No.	Criteria	Percentage of employee responded		
		Yes	No	Partially
1	Remembering of number of courses attended during 2011-12 to 2016-17	95	0	5
2	Relevancy of courses with current activities	92	8	0
3	Objectives of Training – Clear or not before attending course	87	0	13
4	Training method – Interactive or not	90	3	7
5	Duration of Training – Adequate or not	55	8	37
6	Training - Enhanced knowledge	100	0	0
7	Satisfied with training	75	0	25

4. Conclusion

Training of employees and managers are absolutely essential in this changing environment to stay relevant, reduce attrition and increase productivity. Well trained employees of PXE showed both quantity and quality performance. They are helping in reducing wastage of time, money and resources. Training helped them directly in developing both technical and behavioral skills, in optimizing the utilization of human resources for achieving organizational goal, in creating learning culture and healthy working environment and in improving team spirit, positive attitudes, efficiency and productivity of the employees. Training pattern of PXE was found well planned and effective for employees as well as Employer and impact of those training was highly satisfactory and relevant to PXE employees.

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6. References

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