MEASURING TRAINING EFFECTIVENESS AT HDL

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Abstract:

Training and development programmes are essential to organizations which seek to gain a competitive advantage through a highly skilled and flexible workforce. Such organizations are seen as a major element to higher productivity and quality products. A skilled workforce can increase productivity by producing a higher level of work with greater value. It is pertinent to evaluate the training effectiveness of Pharmaceutical Companies in order to produce quality drugs and free from side effects. This paper examines the effectiveness of training and the results are tested through Kolmogorov-Smirnov test is a non-parametric test (alternative to Chi-square test) and results indicate that all the tree dimensions have shown positive impact. The study concluded that there is significant relationship between training and personality development; risk management and change in the productivity levels. This paper also examines the impact of training on the job satisfaction of employees with special reference to Hetero Drugs Limited (HDL).

Key words: Training, Personality development, Risk management, Employee productivity.

Introduction

The purpose of training is to make the trainee to understand the basic principles, areas, and methods of training currently in use in the corporate circles. The game of economic competition has new rules. Firms should be fast and responsive. This requires responding to customers' needs for quality, variety, customization, convenience and timeliness. Meeting these new standards requires a workforce that is technically trained in all aspects. It requires people who are capable of analyzing and solving job related problems, working cooperatively in teams and shifting from job to job. Training has increased in importance in today's environment where jobs are complex and dynamic. Rapidly companies that pay lip-service to the need for training, by lazily setting aside a few hours a year, will soon find themselves at the receiving end when talented employees leave in frustration and other employees find it difficult to beat rivals with new products. To survive and flourish in the present day corporate-jungle, companies should invest time and money in upgrading the knowledge and skills of their employees constantly. For any company that stops injecting itself with intelligence is going to die.

Review of Literature

Grider et. al (1990) in their article "Training Evaluation" conducted a study to determine which training evaluation method were perceived to be the most effective by training professionals, and which methods were most frequently used. For this purpose they selected members of American Society for Training & Development (ASTD). Bramely (1992) in the article "Evaluating Training Effectiveness" believes that behavioural change is introduced through training evaluation presents a, three part approach: (i) Evaluation of training as a process; (ii) Evaluation of changes in knowledge, skills, attitudes and levels of effectiveness and (iii) Various approaches to evaluation such as interviews, surveys, various methods of observing behaviour and testing. Evaluation of the economic and non-economic benefits, and the investments associated with the training and development programmes is absolutely critical to determining how T&D initiatives contribute to corporate performance. Many research studies were taken place on "Role of Executive Training and development programmes" (Taylor & associates, 1993; Lawson, 1993, 1994; Cronshaw & Alexander, 1991; Crawford & Webley, 1992).

Sackett and Mullen, (1993) in their study "Training Evaluation Process" they suggested a broader perspective on a variety of aspects of training process. The purpose of evaluation is to help organizations make decision about future training activities, and provide tools needed to assess the type of evaluation possible in a given situation, to conduct the most informative evaluation possible given the constraints of the situation and to communicate to

organizational decision makers both the strengths and the limitations of whatever evaluation data is obtained. Kraiger et. al (1993) in their research article "New Methods of Training Evaluation" they proposed cognitive, skill-based and affective learning outcomes (relevant to training) and recommended potential evaluation measures. They integrated theory and research from a number of diverse disciplines and have provided a multidimensional perspective to learning outcomes and advanced the theory of training evaluation by providing a conceptually based scheme of learning constructs and measurement techniques.

Lewis and Thorn hill and others (1994) in their research article "Evaluation of Training" they have examined the relationship between training evaluation, organizational objectives, and organizational culture. Explicit recognition of organizational objectives linked to an integrated approach to training evaluation will certainly improve the effectiveness of evaluation. The absence of or ineffective practice of training evaluation within so many organizational is directly related to the nature of organizational culture. Pearce (1995) in his article "Training Evaluation is Often Neglected" Evaluation tends to be a neglected part of training. If it is considered at all, it is usually at a last stage in the training process. The absence of at least some evaluation can lead to an enormous waste of resources. Saxena (1997) in his article "Training evaluation for results" cited a study conducted by American Society of Training and Development (ASTD) on the practice of evaluation. It was reported that the actual practice of evaluation did not often follow the strict recommendations of evaluation literature. Most of the training managers who participated in ASTD's research effort believed that there was value in a concerted effort to increase the practice of employee training evaluation.

Campbell (1998) in her article "Training course/ programme evaluation: principles and practices", it is suggested evaluation can provide a sense of satisfaction and accomplishment to the personnel associated with a course or programme. Everyone needs feedback on how they are doing, and evidence that training is worthwhile is a source of pride. Apart from this, periodic evaluations are necessary to assure optimum training relevance, effectiveness, and cost efficiency. Blanchard et al. (2000) studied training evaluation practices at both management and non-management level in Canada through a survey of 202 organizations, employing a total of over 4,70,000 employees, thus representing a significant portion of the Canadian workforce. The survey data indicated that only one-fifth of the Canadian organizations evaluated their training as suggested by academic standards. The researchers presented practitioner perspective as a supporting rationale for the survey results.

Yadapadithaya (2001) studied the current practices of evaluating training and development programmes in the Indian corporate sector. Srivastava. et al. (2001) evaluated the effectiveness of various training programmes offered by the in-house training centre of Tata Steel, Shavak Nanavati Training Institute (SNTI), India. Effectiveness of training was measured in terms of various outcomes such as satisfaction level; reaction and feedback of participants; and change in performance and behavior as perceived by participants, their immediate supervisors, and departmental heads. Ogunu (2002) examined the management training and development programme of Guinness Nigeria PLC, Benin City with a view to ascertaining its relevance, adequacy, and effectiveness. The study revealed that facilities for staff training were adequate for effective training of management staff, training programmes for management staff were relevant to the jobs they performed and the training programmes undergone by staff did indeed improve their performance and effectiveness at works.

Interestingly, much of the existing literature on training and development has lamented the failure of organizational efforts to significantly improve the knowledge, skills, and attitudes of employees or affect business performance (Campbell, Dunnette, Lawler, & Weick, (1970); Greiner, (1987). As Hall (1984) pointed out more than a decade ago, "if strategic HRM is rare in contemporary organizations, then the strategic development of managers is virtually non-existent". Greiner (1987) in his article "Management Development" similarly concluded that "entertainment without development" accounts for about 75 per cent of the management development budget.

A Brief Profile of Hetero Drugs Limited

Hetero Drugs Limited (HDL) has been established in the year 1993 by Dr. B. Pardhasaradi Reddy, with the motto to be the best in the APIs manufacturing. Today with its growth and development brought up to 10 units and immensely increased size of employees approximately 15,000. Hetero embodies the vision of a top notch player in developing and commercializing products catering to a variety of therapeutic categories, integrating into a leading finished dosage manufacturer. True to the statement,

"Where the Future started yesterday" with a foresight on the current trends in the pharmaceutical market, with full fledged marketing capabilities, the company has been able to market its products in over 100 countries in Asia, Middle - east, Eastern Europe and Latin America. The Hetero Drugs Limited is able to strictly follow the procedures prescribed by the pharmacopoeias and care a niche in the market, given the present scenario, where it requires the intellectual strengths, core competencies and right vision for future. This report deals about the various departments and various processes involved in each division with skilled manpower.

Mission

Hetero's mission is to be a globally acclaimed pharmaceutical company. Meeting the requirements of healthcare imbibing the philosophy of both commercial and social concerns, driven by research and manufacturing capabilities.

Vision & Values

Hetero visualizes itself as an aggressive player in the global pharmaceutical scenario. Supplying generics developed, combining intellectual property, research strengths and strong human resource inputs. The company values the concepts of having social responsibilities in the course of its assent to greater heights. It strongly believes in focusing on customer requirements and delivering the products at the right place. Hetero considers its human resources as the core of all its capabilities and believes in tapping and honouring the talents of its members to reach the Zenith of success. It believes in continuous evaluation and improvement in all the factors that contribute in transforming the organization into a global force. Hetero takes due cognizance to the fact that the processes that it develops should be all eco-friendly and should not result in any consequence that harms the ecological harmony.

Objectives of The Study

The present study is based on the following objectives:

1. To understand how training assists the employees to acquire skills, knowledge and attitude resultant in high productivity and achieving organization objectives;
2. To study the perception of the employees regarding training methods, quality and job satisfaction with special reference to Hetero Drugs Limited;
3. To evaluate the training effectiveness in terms of personality development, risk management and productivity levels of employees after and before training.

Hypotheses

To realize the above objectives, the following null hypotheses are framed.

- H0: There is no relationship between training and personality development of trainees.
- H0: There is no relationship between training and its role in risk management at workplace.
- H0: There is no change in the employee productivity before and after training.

Scope of the Study

The present study "Measuring training effectiveness" is confined to the aspect of training programme being conducted by Hetero Drugs Limited, Unit - III, Jeedimetla, Hyderabad. It is in order to highlight the changing needs of the staff involved in learning new skills. The parameters that are covered in this study are (i) training methods, quality and job satisfaction of employees; (ii) the relationship between training and personality development of trainees; (iii) the relationship between training and its role in risk management and any change in the employee's productivity levels.

Methodology and Database

Data has been collected both from primary and secondary sources. Primary data was collected by canvassing a structured questionnaire among the target sample employees. Secondary data was collected from the company manuals and other sources like magazines, books, internet, newspapers, etc. In all there are about 503 employees working in different divisions/departments of Hetero Drugs Limited, Unit - III, Jeedimetla, Hyderabad based on their respective jobs and responsibilities. Out of 503 trained employees only 100 (20%) of them were considered as the sample respondents for this study. The data was collected from 100 respondents out of total 503 trained (during the calendar year 2012) manpower has been analyzed using simple percentages, and Kolmogorov-Smirnov Test to validate the results.

Kolmogorov-Smirnov test (K-S test)

The K-S test has the advantage of making no assumption about the distribution of data. (Technically speaking it is non-parametric and distribution free). In K-S test is a nonparametric test for the equality of continuous, one-dimensional probability distributions that can be used to compare a sample with a reference probability distribution. The Kolmogorov-Smirnov statistic quantifies a distance between the empirical distribution function of the sample and the cumulative distribution function of the reference distribution, or between the empirical distribution

functions of two samples. In the application of the Chi-square test, some of the information is lost due to the grouping of the data into intervals. In order to avoid this loss, alternative tests are developed. The most important of these alternatives to chi-square test is the Kolmogorov-Smirnov test. The formula to calculate K-S test:

Dmax= [Fo(X)-Fe(X)]

Where,

Fo(X) = Observed cumulative frequency; Fe(X) = Expected cumulative frequency.

Accept or Reject criterion

Decision arrived from the test is based on calculated value and comparing with the critical value (table value), if the calculated value is higher, we accept the alternative hypothesis. Similarly, if the calculated value is less than the table value, we accept the null hypothesis.

Results and Discussion

In this section, an attempt has been made to analyze the employees' perception towards the Training programmes and its effectiveness being conducted at Hetero Drugs Limited, Hyderabad. The details of the discussion are presented as below:

Training methods: HDL as a pharmaceutical company produces drugs by employing eligible manpower. However, HDL conducts training to its manpower development and makes them suitable as per standard norms and quality measures. For this purpose HDL has specific training modules such as (i) Job rotation; (ii) Job instruction training; (iii) Role planning and (iv) Lecture method. To know the perception of its trained manpower which method is more useful and effective? Accordingly, table 1 reveals the methods of training followed at HDL. The majority of the respondents said that the role description and planning is one of the effective methods which accounted for 39 percent, then job instruction training with 29 percent, and then job rotation & lecture method both with 11 percent and 21 percent respectively. Hence, it is concluded that care role description and planning is required in producing quality drugs.

Table -1 Training methods used by HDL

Training method and Job Satisfaction of Employees: it is pertinent to validate the existing training method from the point of view of its employees and their satisfaction towards the same. The analysis of job satisfaction towards training method is presented in table 2. The majority of the respondents agreed with 63 percent, strongly agreed with 26 percent, disagreed with 8 percent and strongly disagreed with 3 percent. Hence, it is concluded that the employees derived satisfaction from the existing training methods.

Table-2 Training method and Job Satisfaction of Employees

Training quality: There is a relationship between product quality and customer satisfaction, similarly, there is a relationship between product quality and trained manpower which determine overall development of the organization. Accordingly the responses towards the quality of training programmes from its employee's perspective and majority of the respondents said good accounted for 50 percent, average with 32 percent, very good with 16 percent and poor with 2 percent on the quality of training programme.

Table-3 Quality of Training Programme

Training and Personality Development: From the table 4 it is found that majority of employees felt that training should be given whenever required (70%). Whereas 19 percent of employees said that training should be given on monthly basis. Rest of the employee's point as training should be given annually, half yearly and quarterly (6%, 4% & 1%). It is concluded that majority of employees preferring to take training whenever required. The same has been proved statistically with the help of following hypotheses.

Table-4 Cross Table (Training and Personality Development)

H0: There is no relationship between training and personality development of trainees.

Kolmogorov-Smirnov Test-1

Result: Calculated value of Dmax (0.250) is greater than the table value (0.136). Hence, H0 is rejected and it is concluded that there is a significant relationship between training and personality development of trainees.

Training and Risk Management: To find out the relationship between training and risk management, the analysis is presented in the following cross table 5, majority of the respondents strongly agreed with 55 percent, agreed with 42 percent and rest of them are disagreed which is accounted for only 3 percent. Hence, it is concluded that the training is helpful in minimizing the risk at workplace.

Table-5 Cross Table (Training and Risk Management)

H0: There is no relationship between training and its role in risk management at workplace.

Kolmogorov-Smirnov Test-2

Result: Calculated value of Dmax (0.251) is greater

than the table value (0.136). Hence, H0 is rejected and it is concluded that there is a significant relationship between training and role in risk management at work place.

Training and Employee Productivity: To find out the relationship between training and employee productivity before and after training, the analysis is presented in the following cross table 6. It highlights the role of training in improving the employee's productivity at the workplace. It is revealed that the majority of respondents have agreed (51%), agreed 18 and others disagreed with the same. Hence, it is concluded that the training is helpful in improving the employee's productivity.

Table-6 Cross Table (Employee Productivity Before and After Training)

H0: There is no change in the employee productivity before and after training.

Kolmogorov-Smirnov Test - 3

Result: Calculated value of Dmax (0.298) is greater than the table value (0.136). Hence, H0 is rejected and it is concluded that there is a significant change in the employee productivity before and after training.

Suggestions

1. Training should be given to every employee whenever it is required to handle advanced technology and to improve higher productivity.
2. Role description and planning should be there in consultation with the staff and job instruction should be modified accordingly.
3. Supervisory staff should be involved in importing training to employees along with outside subject experts.
4. On the job training should be given so as to give them exposure to job description and quality work life (QWL) of employees may ensure their training effectiveness.
5. Nomination of employees to attend training should be informed well in advance in order to make interesting.
6. Good working environment should be created so as to use their training skills in the field and quality aspects of training should be improved from average to good.
7. According to this study, it is found that the productivity of trained employees has improved and hence it is suggested to training programmes should be made compulsory for all irrespective of their length of services.

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Table -1 Training methods used by HDL

Methods of training	Frequency	Percentage
Job rotation	11	11
Job instruction training	29	29
Role description and planning	39	39
Lecture method	21	21
Total	100	100

Source: Questionnaire data

Table-2 Training method and Job Satisfaction of Employees

Opinion	Frequency	Percentage
Strongly agree	26	26
Agree	63	63
Disagree	08	08
Strongly disagree	03	03
Total	100	100

Source: Questionnaire data

Table-3 Quality of Training Programme

Ratings	Frequency	Percentage
Very good	16	16
Good	50	50
Average	32	32
Poor	02	02
Total	100	100

Source: Questionnaire data

Table-4 Cross Table (Training and Personality Development)

Training / **Personality development**	Strongly Agree	Agree	Disagree	Strongly Disagree	**Total**
Strongly Agree	12	11	0	0	23
%	52.17	47.83	0.00	0.00	100.00
Agree	4	27	1	0	32
%	12.50	84.38	3.13	0.00	100.00
Disagree	1	4	0	0	5
%	20.00	80.00	0.00	0.00	100.00
Strongly Disagree	1	38	1	0	40
%	2.50	95.00	2.50	0.00	100.00
Total	**18**	**80**	**2**	**0**	**100**

Source: Questionnaire data

KOLMOGOROV-SMIRNOV TEST -1

F	**CF**	**$F_0(X)$**	**E**	**CE**	**$F_e(X)$**	**$F_0(X)-F_e(X)$**
3.50	3.50	0.46	1.91	1.91	0.25	0.21
2.14	5.64	0.74	1.91	3.82	0.50	0.238
2.00	7.64	1.00	1.91	5.73	0.75	**0.250(Dmax)**
0.00	7.64	1.00	1.91	7.64	1	0.00
7.64			7.64			

F = Observed frequency. CF = Cumulative frequency.
E = Expected frequency. Dmax= Maximum deviation.
n = Sample size.
Calculated value of Dmax = 0.250
Table value @ 5% level of significance =1.36/?n =1.36/?100 = 0.136.

Table-5 Cross Table (Training and Risk Management)

Training / **Risk management**	Strongly Agree	Agree	Disagree	Strongly Disagree	**Total**
Strongly Agree	11	11	0	1	23
%	47.83	47.83	0.00	4.35	100.00
Agree	9	21	2	0	32
%	28.13	65.63	6.25	0.00	100.00
Disagree	1	4	0	0	5
%	20.00	80.00	0.00	0.00	100.00
Strongly Disagree	34	6	0	0	40
%	85.00	15.00	0.00	0.00	100.00
Total	**55**	**42**	**2**	**1**	**100**

Source: Questionnaire data

KOLMOGOROV-SMIRNOV TEST-2

F	CF	$F_0(X)$	E	CE	$F_e(X)$	$F_0(X)-F_e(X)$
3.00	3.00	0.38	1.96	1.96	0.25	0.13
2.88	5.88	0.75	1.96	3.91	0.50	**0.251(Dmax)**
1.95	7.83	1.00	1.96	5.87	0.75	0.250
0.00	7.83	1.00	1.96	7.83	1	0.00
7.83			7.83			

Calculated value of Dmax = 0.251
Table value @ 5% level of significance =1.36/?n =1.36/?100 = 0.136.

Table-6 Cross Table (Employee Productivity Before and After Training)

Training Before / **Training After**	Strongly Agree	Agree	Disagree	Strongly Disagree	**Total**
Strongly Agree	11	10	1	1	23
%	47.83	43.48	4.35	4.35	100.00
Agree	2	27	3	0	32
%	6.25	84.38	9.38	0.00	100.00
Disagree	1	4	0	0	5
%	20.00	80.00	0.00	0.00	100.00
Strongly Disagree	4	10	15	11	40
%	10.00	25.00	37.50	27.50	100.00
Total	**18**	**51**	**19**	**12**	**100**

Source: Questionnaire data

Kolmogorov-Smirnov Test - 3

F	CF	$F_0(X)$	E	CE	$F_e(X)$	$F_0(X)-F_e(X)$
3.11	3.11	0.43	1.83	1.83	0.25	0.18
2.73	5.84	0.80	1.83	3.66	0.50	**0.298(Dmax)**
1.47	7.31	1.00	1.83	5.48	0.75	0.250
0.00	7.31	1.00	1.83	7.31	1	0.00
7.31			7.31			

Calculated value of Dmax = 0.298
Table value @ 5% level of significance =1.36/?n =1.36/?100 = 0.136.