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# Efficacy of Training and Development Analysis Based On Competency in a Brewing Industry

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## *Abstract*

*Indian Industries have now started facing tremendous competition due to dynamic business environment. Pressures are increasing day by day for managers to survive in this highly competitive environment. Training and Development for managers are essential to cope with ever changing competitive environment. The focus of training programme has been changed from traditional apprenticeship training to the learner centred training for developing competencies. The concept of Competency Based Training (CBT) is now becoming a recognized training method. This approach of training emphasizes on what a person can do in the workplace as a result of completing a program of training or based on workplace experience and learning. This paper attempts to highlight the effectiveness of training and development and the correlation between training and competency in Kalyani Unit of United Breweries Limited (West Bengal) by using Chi square Test, Factor Analysis and Correlation Coefficient. The study is based on primary data. The result explores a positive relationship between the factors contributing to the effectiveness of the training and the level of competency and found out the correlation between competency and training in UBL.*

*Key Words: Training and Development, Competency Based Training and Training Need Assessment.*

## **Introduction**

Training & development programmes are necessary in any organization for improving the quality of work of employees at all levels in the world of fast changing technology, changing values and environment. As organizations strive to compete in the global economy, differentiation on the basis of skills, knowledge, and motivation of their workforce becomes importance. Training refers to a systematic approach to learning and development to improve individual, team, and organizational effectiveness (Goldstein & Ford 2002).

The purpose of both training and development is similar. While Training is a short-term process utilizing a systematic and organized procedure by which non-managerial personnels acquire technical knowledge and skills for a definite purpose,

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Development is a long term educational process utilizing systematic and organized procedure by which managerial personnel conceptualizes the theoretical knowledge. Training refers to instruction in technical and mechanical operations, like operation of some machine. It is designed primarily for non-managers, it is for a short duration and it is for a specific job related purpose.

Competence refers to a potential ability and/or a capability to function in a given situation. Competency focuses on one's actual performance in a situation. According to Norman (1985), competency is more than knowledge. It includes the understanding of knowledge, clinical, technical, and communication skills and the ability to problem solve through the use of clinical judgment. According to Verma (2006) competencies create an environment that fosters empowerment, accountability and performance evaluation which is consistent and equitable.

This research study in United Breweries Ltd. at Kalyani (W.B.) aims to analyze the efficacy of training and development based on competency and to find out whether there is a relationship between competency and training or not and also to measure the degree of correlation between this two. This study also shows the main factors contributing to training. The main aim of the study is to develop understanding about the organisation and importance of training and development.

### **Competency based training (CBT)**

In the study of Harris et al (1995), competency-based education is perceived as an approach to training that places emphasis on what a person can do in the workplace. Competency standards are industry-determined specifications of performance that set out the skills, knowledge and attitudes required to operate effectively in a specific industry or profession. Competency-based training focuses on the development of the skills, knowledge and attitudes required to achieve those competency standards. One of the primary features of Competency-based training is that each learner's achievement is measured against the competency standards rather than against the achievement of other learners. Under the CBT approach, each

learner is assessed to find the gap between the skills they need (as described in the Training Package) and the skills they already have. A training program is then developed to help the learner acquire the missing skills. In many cases, the learner has no current skills and the training program is a full curriculum based course. However, the learning outcomes achieved through the curriculum are derived from the competencies described in the training package. CBT programs are often comprised of modules broken into segments called learning outcomes which are based on standards set by industry and assessment is designed to ensure each student achieves all the outcomes (skills and knowledge) required by each module.

### **Benefits of Training & Development**

Training effects on performance may be subtle (though measurable). In a qualitative study involving mechanics in Northern India, Barber (2004) found that on-the-job training led to greater innovation and tacit skills. Tacit skills are behaviors acquired through informal learning that are useful for effective performance. Ellis et al. (2005) advocated that training improved declarative knowledge within the team and in comparison with untrained teams. Trained teams demonstrated better planning and task coordination, collaborative problem solving and communication in novel team and task environments.

Aragón-Sánchez et al. (2003) investigated the relationship between training and organizational performance by conducting a survey for 457 small and medium-size businesses in the United Kingdom, the Netherlands, Portugal, Finland and Spain. Organizational performance was operationalized as (a) effectiveness (i.e., employee involvement, human resource indicators, and quality) and (b) profitability (i.e., sales volume, benefits before interest and taxes, and a ratio of benefit before taxes/sales). Results indicated that some types of training activities including on-the-job training and training inside the organization using in-house trainers, were positively related to most dimensions of effectiveness and profitability.

Frayne & Geringer (2000) conducted a field experiment in which they administered self-

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management training (lectures, group discussions, and case studies) to 30 salespeople in the life insurance industry. Results showed that salespeople who participated in the training program demonstrated higher self-efficacy, outcome expectancy and objective outcomes as well as subjective job performance.

Ubeda Garc´ya (2005) conducted a study including 78 Spanish firms with more than 100 employees. This study related organizations' training policies (e.g., functions undertaken by the training unit, goals of the training unit, nature of training and how training is evaluated) with four types of organizational-level benefits: employee satisfaction, customer satisfaction, owner/shareholder satisfaction and workforce productivity (i.e., sales per employee). Results suggested that training programs oriented toward human capital development were directly related to employee, customer and owner / shareholder satisfaction as well as an objective measure of business performance (i.e., sales per employee).

A well planned and well executed training programme should result in reduction in waste & spoilage, improvements in methods of work, reduction in learning time, reduction in supervisory burden, reduction in machine breakage and maintenance cost, reduction in accident rate, improvement in quality of products, improvement in production rate, improvement of moral and reduction in grievances, improvement of efficiency and productivity, reduction in manpower obsolescence, enabling the organization to provide increased financial incentives, opportunity for internal promotion and raising of pay rates, wider awareness among participants, enlarged skills, and personal growth. This naturally underlines the need for developing the professional skill and knowledge of these managers who did not have the benefit of formal education in management.

### **Objectives of the research study**

- (i) To test the relationship between the efficacy of training & development and level of competency based on skill grade.
- (ii) To find out correlation between competency and training.

### **Conducting a Training Needs Assessment**

Need assessment, or need analysis, is the process of determining the organization's training needs and seeks to answer the question of whether the organization's needs, objectives, and problems can be met or addressed by training. Within this context, need assessment is a three-step process that consists of organizational analysis e.g. firstly, whether or not organizational goals can be attained through personnel training and there is need for training in the organization. Secondly, task analysis e.g. what must the trainee learn in order to perform the job effectively and what will be the training cover. Thirdly, person analysis e.g., which individual needs training and for what.

Thus, conducting a systematic needs assessment is a crucial initial step to training design and development and can substantially influence the overall effectiveness of training programs (Goldstein & Ford, 2002).

### **Methodology**

The research design used here is exploratory which often relies on informal discussions with consumers, employees, management or competitors and more formal approaches through in-depth interviews, focus groups, projective methods and case studies.

The study is carried out on United Breweries Limited (UBL) which is engaged in manufacture, purchase and sale of beer including licensing of brands. United Breweries is India's largest producer of beer with a market share of around 48% by volume. The study is conducted at Kalyani Unit of this organization situated in West Bengal.

Researchers have collected primary data during the course of doing experiments through the questionnaire to the Head of the Departments and requested them to fill up the questionnaire for each employees of the concerned department. Another questionnaire was given to each of the employees regarding the effectiveness of training. The former gives an indication about the skill graded competencies of workmen for both the current and previous year. The later tells about the factors contributing to the effectiveness of training in that

unit. Here in United Breweries Limited (UBL), a yearly training need assessment is done by the department head and that details are received by the manager, personnel and the same are examined by him with his associates. The schedule of training is prepared accordingly and that is sent to the GM by the manager, HR for approval. On the basis of approval, training is arranged. A record of training is maintained by the Manager Personnel. Researchers collected data from that record also to know how many workers were trained in the previous year and on what subject.

### Tools for data analysis

For carrying out the data analysis, Chi square test and Correlation Coefficient were used. Chi square test was carried to understand whether there is any relationship between training and competency, or not. Correlation Coefficient was used to find out the degree of correlation between the training and competency.

### Results and findings : Chi square Test (Test for Independence of Attributes)

Here researchers have collected information on the competency of all the permanent workers of 110 people through competency mapping questionnaire. The survey has found that competency has been increased for 70 workmen and for rest of the 40 workman the competency level has remained unchanged.

This comparative study shows that out of 77 workers for whom training was imparted, competency is increased for 55 workers and the rest of the 22 workers are at the same competency level as earlier. The study also shows that the 33 workers for whom there was no training, competency level is increased for 11 workers and the rest of the 18 workers maintained the same competency level as earlier. It can be shown as-

Competency Training	Competency has increased for	Competency has not been increased for	TOTAL
Training is imparted to	55	22	77
Training is not imparted to	15	18	33
TOTAL	70	40	<b>110</b>

Here to test,

$H_0$ : There is no relationship between training and the competency

Against,  $H_1$ : competency depends on training,

Now the observed value of  $\chi^2$ -statistic is

$$\chi^2 = 6.735$$

Corresponding to the level  $\alpha = 0.05$  and d.f. = 1, the tabulated  $\chi^2$  value  $\chi^2_{0.05, 1} = 3.84$  at 5% level.

Since,  $\chi^2_0 > \chi^2_{0.01, 1}$ , the researcher did not accept  $H_0$  at 5% level in favour of  $H_1$  indicating that competency depends on training.

Now,

$$r = \text{Covariance (X, Y)} \div (\text{Sx} * \text{S}_y)$$

$$= 54.68 \div (7.38 * 8.64)$$

$$= 0.8$$

### Correlation Coefficient

After gaining insight into the matter that competency depends on training, there is a need to measure the correlation between competency and training. This study helps in understanding the strength of relationship between these two variables. For that purpose the trained workers were selected based on stratified random sampling method. Researchers found that the trained workers are distributed among the seven departments in the ratio of 5:3:6:10:26:10:14. Researchers have selected specific number of workers from each department at random which is corresponding to the proportion of the number of workers at that department in the population as a whole. Thereby, they had taken the sample in the ratio of 2:1:2:3:9:3:5 and obtained a total of 25 samples. The researcher had taken the selected worker's competency scores before the training and after the training.

As the correlation coefficient (r) is equal to 0.8, so there is a moderate positive relationship between competency and training.

### Factor Analysis

Researchers had given a training effectiveness questionnaire to the workers and asked them to complete the same. The questionnaire contains 25 questions. These questions are considered as various factors. The workers had given the answers on the basis of the options which were in the questionnaire. Then the researcher categorized the factors based on their similarity in nature and grouped them into 4 categories namely PLAN, CONCEPT, EVALUATION & EFFECTIVITY. The result is as follows:

Q u e s t i o n	Parameters	Fac- tor Cate- gory	1		2		3		4		5		Sur vey Pop ulati on	
			Not at all true		A Little true		Some what true		True to a great extent		Very True			
2	Training is well planned	<b>P L A N</b>	7	6.8	15	14.6	49	47.6	32	31.1	0	0.0	103	2.94
3	Training is of sufficient duration		0	0	20	19.4	62	60.2	21	20.4	0	0.0	103	2.92
5	Norms and value of this company are clearly communicated as and when required through training		0	0	13	12.6	52	50.5	30	29.1	8	7.8	103	3.22
7	Workmen find orientation training and re-training very useful in the organization		0	0	51	49.5	31	30.1	17	16.5	4	3.9	103	2.67
1 2	Training of workers is given due importance in the organization		0	0	35	34.0	43	41.7	22	21.4	3	2.9	103	2.85

Q u e s t i o n	Parameters	Fac- tor Cate- gory	1		2		3		4		5		Sur vey Pop ulati on	
			Not at all true		A Little true		Some what true		True to a great extent		Very True			
1 3	Employees are sponsored and for training programmes on the basis of carefully identified developmental needs.	<b>P L A N</b>	0	0	28	27.2	64	62.1	7	6.8	4	3.9	103	2.79
1 6	Employees sponsored for training go with a clear understanding of knowledge and skills they are expected to acquire from training		7	6.8	48	46.6	33	32.0	12	11.7	3	2.9	1.03	2.50
1 7	The HRD department conducts briefing and debriefing sessions for employees sponsored for training		0	0	18	17.5	43	41.7	42	40.8	0	0.0	103	3.14
1 8	In-company programmes are handled by competent faculty		0	0	0	0.0	30	29.1	59	42.0	1 4	13. 6	103	3.14
2 4	External Training programmes are carefully chosen after collecting enough information about the need, quality and suitability of Training		0	0	13	12.6	70	68.0	15	14.6	5	4.9	103	3.03
													<b>Ave rage Plan</b>	<b>2.92</b>
1	Training is given adequate importance in the organization	<b>C O N C E P T</b>	6	5.8	10	9.7	59	57.3	28	27.2	0	0.0	103	2.97
4	Training provides an excellent opportunity for employees to learn comprehensively about the organization		0	0	12	11.7	67	65.0	20	19.4	4	3.9	103	3.06
2 5	There is a well designed and widely shared training policy in the company		0	0	16	15.5	59	57.3	28	27.2	0	0.0	103	3.03
													<b>Ave rage Con cept</b>	<b>3.02</b>

8	Training is periodically evaluated and improved	<b>E V A L U A T I O N  &amp;  E F F E C T I V I T Y</b>	0	0	42	40.8	44	42.7	12	11.7	5	4.9	103	2.72
14	Those who are sponsored for the training programmes take the training seriously		0	0	66	64.1	32	31.1	5	4.9	0	0.0	103	2.34
15	Employees in this organization participate in determining the training they need		0	0	81	78.6	15	14.6	7	6.8	0	0.0	103	2.22
19	The quality of in-company programmes in the organization is wxcellent		0	0	10	9.7	6.5	63.1	23	22.3	5	4.9	103	3.13
21	Employees returing from training are given adequate free time to reflect and plan improvements in the organization		0	0	55	53.4	48	46.6	0	0.0	0	0.0	103	2.39
													<b>Average Evaluation</b>	<b>2.56</b>
6	Senior executives/officers take interest and spend time with employees during training		0	0	35	34.0	48	46.6	14	13.6	6	5.8	103	2.83
9	Employees are helped to acquire technical knowledge and skills through training		0	0	18	17.5	72	69.9	10	9.7	3	2.9	103	2.89
10	There is adequate emphasis on developing capabilities to employees through training		0	0	36	35.0	50	48.5	14	13.6	3	2.9	103	2.76
11	Human relations competencies are adequately attempted to be developed in this organization through human skills		5	4.9	55	53.5	20	19.4	18	17.5	5	4.9	103	2.56
20	Senior line managers are eager to help their juniors develop through training		0	0	28	27.2	60	58.3	12	11.7	3	2.9	103	2.82
22	Line managers provide the right kind of climate to implement new ideas and methods acquired by their juniors through training		0	0	65	63.1	33	32.0	5	4.9	0	0.0	103	2.35
23	Line managers in the organization utilitize and benefit from the training programmes imparted to employees		23	22.3	29	28.2	51	49.5	0	0.0	0	22.0	103	3.27
												<b>Average Effectivity</b>	<b>2.78</b>	
												<b>Average of all data</b>	<b>2.82</b>	

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The survey shows that the workmen/employees feel that the PLAN, CONCEPT, EVALUATION & EFFECTIVITY of training at UBL, Kalyani (W.B.) are existing at a reasonably appreciable level and there is scope for improvement.

### **Conclusion**

Business conducting and survival in the present day turbulent environment rely on organizational knowledge in a sense of giving timely and appropriate answer to challenges. The ability of individuals and organizations to acquire new knowledge has become the key comparative advantage. The concept of knowledge management and management of human resources, especially the function of employee training and development are embedded with the basic resource of modern business, i.e. with knowledge and its utilization. Renewing knowledge is imperative for the organization, and not an option. Training and development of employees is a continuous procedure which is the only meaningful and logical approach under condition of knowledge obsolescence, dynamic changes and increasing need for constant product and service innovations. Human resources represent intellectual capital which is the new source of organizational resources and the organization could increase them only through training, development of employees. The prosperity of organizations becomes explicitly dependent on the intellectual capacity of their employees and their ability to change and adjust to the dynamic business environment. The only way for present day organizations to survive is the imperative to innovate or perish. Since this depends on the knowledge the organization possesses, this imperative could be read as: learn faster than competitors. The logical sequence is: knowledge creation through training and development – innovation – competency development.

The objectives wise conclusion of the research study is as follows:

#### **(i) To test the relationship between the efficacy of training & development and level of competency based on skill grade.**

The level of competency depends on training and development.

#### **(ii) To find out correlation between competency and training.**

As the correlation coefficient (r) is equal to 0.8, so there is a moderate positive relationship between competency and training.

#### **(iii) To identify the factors contributing to the effectiveness of the training.**

The survey shows that the workmen/employees feel that the PLAN, CONCEPT, EVALUATION & EFFECTIVITY of training at UBL, Kalyani (W.B.) is existing at a reasonably appreciable level and there is a scope for improvement.

So briefly the conclusion of this entire research study is that there is an existing moderate positive relationship between competency and training. This indicates that if an organisation provides training to its workers, then there is a moderate chance that their competency will be increased. Competency enhancement would lead to the improvement in the performance of the organization in terms of productivity, quality of the product, skill, knowledge, and attitude and last but not the least the profitability.

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