**Evaluation of the effectiveness of training programmes in BPCL and ONGC Mumbai.

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ABSTRACT

Training and development is essential to organizations which seek to gain a competitive advantage through a highly skilled and flexible workforce, and are seen as a major element to high productivity and quality performance. A skilled workforce can increase productivity by producing a higher level of work with greater value. A skilled workforce can improve a firm's operative flexibility as they will be easier to retrain due to their broad knowledge base of multi-skills. This allows management to be confident in using new technology and provide employers with progressive adjustment to change in production methods, produce requirement and technology. Training is growing importance to companies seeking to gain an advantage among competitors. There has been significant debate among professionals and scholars as to the affect that training has on both employee and organizational goals. One school of thought argues that training leads to an increase in turnover while the other states that training is a tool to that can lead to higher levels of employee retention Regardless of where one falls within this debate, most professionals agree that employee training is a complex human resource practice that can significantly impact a company's success.

Key Words :**Training Programs, Tangible And Intangible Factors, Measuring Employees Performances, Petroleum Sectors In Maharastra**

(** For measuring Evaluations and effectiveness of training programs. **Tangible And Intangible are one of the majors factors.)**

INTRODUCTION

1) **Wood and Menezes (1998)** described high performance management (HPM) as high involvement of management which transfers workplace and bring flexible production systems through high performance system.

2) **Mahoney and Watson (1993)** argue that the employee involvement model of workplace has the most potential impact on performance, although it may not be appropriate for all organizations given the high cost of establishing and maintaining employee involvement. By decentralizing decision making and promoting a relaxed work environment along with training can lead to increased performance, and if all employees are involvement in training this will increase their morale and it will result in loyalty and commitment.

3) **Sheppeck and Militello (2000)** focus HRM strategy into four groups: employment skill and work policies, supportive environment, performance measurement and reinforcement and market organization whereby.

LITERATURE REVIEW

 Guest (1997) divides in to three categories: differentiated on innovation, focus on quality and cost-reduction. However, there are many definitions in previously researches on HRM strategy, but all strategies used to achieve the same organizational goal through HRM practices.

Sivasubramanian and Kroeck (1995) verify the various perspective of human resource management as the concept of fit or integration based on Guest (1997) suggests the various types of human resource management can be classify in two dimensions as internal and external fit. External fit explain HRM as strategic integration whereby internal fit as an ideal of practices. One of the internal parameter as training and development.

Ruwan (2007) empirically evaluated six human resource (HR) practices (realistic job, information, job analysis, work family balance, career development, compensation and supervisor support) and their likely impact on the Marketing Executive Turnover. Results of regression showed that the HR practices on job analysis are strong

predictors of Marketing Executive Turnover. A long the same line, Abang, May-Chiun and Maw (2009) two components of human resource (HR) practices namely, training and information technology have direct impact on organizational performance.

Zaini, Nilufar and Syed (2009) showed that training and development, team work, HR planning and performance appraisal have positive and significant influence on business performance. It not only improves the productivity of the organization but brings in a large level of job satisfaction on the employee which further leads to commitment.

Schaffner (2001) on his study assert the relationship between job training and productivity, however job training tends to lose value when the workers change job, therefore the organization or firm increase the cost of keeping trained position filled. Notwithstanding, there would doubtful relationship between job training and turnover.

Batt (2002) finds that "high-involvement" practices such as autonomy, team collaboration, and training are related to reduce employee turnover and increased productivity. Supporting by Lynch (1991) an idea about untrained workers lead to change job more often. A long the same line, Huselid, Jackson and Schular (1995) finds that an increasing in high-performance work practices convert decreasing in turnover.

Collins (2005) in a research of similar nature targeting small business have found that effective HR practices impact employee outcomes significantly.Training alone operates only to increase capability. But whether employees Perform to the best of their capability or at some level less than their best capability is driven by a complex host of factors, typically and popularly lumped together under the rubric of the "performancemanagement system" (,Rummler&Brache, 1995). Although these factors may not be organized or even viewed as a systemic entity, they nonetheless operate as a system, either suppressing or enhancing employee performance. Although there has not been enough research on precisely how these and other factors enhance and impinge on training effect, we do know enough to be certain that there is more to achieving training effect than simply putting on good training programs.

Tessmer and Richey (1997), in their summary of training effect research, demonstrate convincingly that training effect—defined as improved performance—is a function of learner factors, factors in the learner's workplace, general organizational factors, and of course, factors inherent in the training program and interaction itself. This interdependence of training on the larger performance system has been amply supported as well by the previous and thorough research

SCOPE OF THE STUDY

 From the review of literature it has been brought to light that historically companies have viewed training as expensive. Unfortunately, when cutbacks were necessary, training was often area where cuts occurred. But literatures also reveal that today's leading edge companies have shifted their perspective of training as an expense tool o that of an investment tool. They recognize that dollars spent increasing and enhancing employee skills are returned via lower recruiting costs, increased productivity, and greater customer satisfaction and retention. Literature also showed that there is always room for improvement on the bottom line and stepping up training is a proven formula for enhanced financial performance.

Top petroleum companies have been spending a large budget on training but there has been no relevant studies till date or detailed research which has brought to light the effect of the money spend against training by petroleum sectors. Hence this study was taken as this could bring to light the effectiveness of training.Hence this study gives a scope to the organization and individual to understand the monetary inputs as against the value produced. Keeping in view parameters such as training vs ROI benefits for individual and company and the heighted and most effective traing programs in petroleum secotrs.

OBJECTIVES OF THE STUDY

1) To study and analyze the tangible and intangible benefits to an individual through training programs.

2)   To identify important tangible and intangible variables.

HYPOTHESIS

Objective 1:

H 01   :- Tangible and intangible are not parallel key factor for training programs.

H 11   :- Tangible and intangible are parallel key factor for training programs.

Score calculation: Scores from seventeen intangible and thirteen tangible variables are calculated on the basis of their response. Every positive response is been given score value 1. This way, we calculated the percentage positive score value for Intangible and tangible factors. These scores are then compared using correlation analysis. The results of the correlation analysis are as below:

Correlation table:

Correlations			Intangible	Tangible
Intangible	**Pearson Correlation**		**1**	**.957****
	p-value			**.000**
	N		**2700**	**2700**
**. Correlation is significant at the 0.01 level (2-tailed).				

Interpretations: The value of the correlation coefficient is 0.957, shows that there is significant (p-value < 0.001) **strong positive correlation between tangible and Intangible factors.** Hence we can conclude that Tangible and intangible factors are parallel to each other. We have **accepted alternative hypothesis** and null Hypothesis rejected.

Objective 2:

The study of important factors is carried out using factor analysis. Using factor analysis procedure we tried to identify important factors (contributing maximum variance in data set) of intangible factors and tangible factors using factor analysis procedure.

Intangible factors: On doing factor analysis procedure for the intangible factors, we identified five factors (From Table 1) which almost contribute 96% variance as important factors.

Table 1:

Total Variance Explained								
Compon ent	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**	
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
A1	5.986	35.209	35.209	5.986	35.209	35.209	3.938	23.164	23.164
A2	3.940	23.178	58.387	3.940	23.178	58.387	3.913	23.015	46.179
A3	3.374	19.850	78.237	3.374	19.850	78.237	3.910	23.000	69.179
A4	1.894	11.139	89.377	1.894	11.139	89.377	2.534	14.905	84.084
A5	1.135	6.675	96.052	1.135	6.675	96.052	2.035	11.968	96.052
A6	.287	1.688	97.740						
7	.139	.820	98.559						
8	.075	.440	99.000						
9	.062	.364	99.364						
10	.039	.227	99.591						
11	.028	.163	99.754						
12	.017	.098	99.852						
13	.012	.072	99.924						
14	.007	.041	99.965						
15	.004	.021	99.986						
16	.002	.010	99.996						
17	.001	.004	100.000						
Extraction Method: Principal Component Analysis.								

(A 1Improved communication, A2Fewer conflicts, A3Better team work A4Improvement in problem solving, A5Job satisfaction, A6Increased organization commitments, A7Reduced complaints, A8 Safe working practices, A 9Reduce

stress,A10. Reduce absenteeism, A11Increase co-operative ,A12Positive attitude,A13Loyalty, A14Self confidence, A15 Perception of job A16 Responsibilities A17. Perceived change in performance.)

Rotated Component Matrix

Table 2:

			Component		
	1	2	3	4	5
A1	-.039	.107	.019	.929	.255
A2	.258	.939	-.003	.143	.034
A3	.935	.240	.026	.000	-.039
A4	.021	.001	.984	-.015	.030
A5	.248	.923	-.005	.150	-.035
A6	.962	.247	.033	-.034	-.010
A7	.025	-.002	.991	.002	.025
A8	-.027	-.002	.048	.197	.976
A9	-.024	.427	-.065	.782	-.032
A10	.282	.931	9.343E-5	.147	.010
A11	.963	.244	.034	-.032	-.012
A12	.044	-.006	.982	-.019	.034
A13	.260	.932	.005	.154	-.002
A14	.963	.242	.034	-.034	-.010
A15	.024	-.001	.991	.001	.025
A16	-.025	-.003	.048	.196	.976
A17	-.030	.105	.003	.943	.235

Title row above: Rotated Component Matrix[a]

From above rotation component matrix, we tried to identify the variables from the seventeen intangible variables. The maximum value in column of rotated component matrix (marked in RED color) is used as an indicator for factor. The following factors are identified.

Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
A11. Increase	A2Fewer	A7Reduced	A17. Perceived	A8 Safe working

cooperative	conflicts	complaints	change in performance.	practices
A 14 Self confidence		A15 Perception of job		A16 Responsibilities

Tangible Factors: On doing factor analysis procedure for the tangible factors, we identified five factors (From Table 3) which almost contribute 93% variance as important factors.

Table 3

Total Variance Explained								
Compon ent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
B1	5.780	44.464	44.464	5.780	44.464	44.464	3.915	30.116	30.116
B2	2.966	22.818	67.282	2.966	22.818	67.282	3.890	29.920	60.035
B3	2.195	16.882	84.164	2.195	16.882	84.164	2.953	22.718	82.753
B4	1.238	9.525	93.689	1.238	9.525	93.689	1.422	10.936	93.689
B5	.544	4.183	97.872						
B6	.078	.600	98.472						
B7	.071	.547	99.019						
B8	.048	.369	99.388						
B9	.037	.282	99.670						
B10	.023	.176	99.846						
B11	.014	.106	99.952						
B12	.004	.032	99.984						
B13	.002	.016	100.000						
Extraction Method: Principal Component Analysis.									

(B1.New Ides,B2. Innovation,B3. creativity,B 4. Goal setting, B5.Good leadership quality,B6. Reduce duplication of works,B 7.Faster access to information,B8.Time saving ,B9. Less supervision,B10. Labour saving, B11.Less over time.B12.Less time on mistake B13 Fewer rewoks.)

Rotated Component Matrix

Table 4 :

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
B1	.948	.248	-.006	.063
B2	.243	.946	.025	-.046
B3	-.003	.036	.985	.035
B4	.957	.250	.001	.067
B5	.242	.959	.030	-.039
B6	-.001	.028	.993	.016
B7	-.049	.000	.060	.874
B8	.244	-.092	-.010	.795
B9	.956	.252	.006	.067
B10	.240	.960	.027	-.038
B11	.000	.031	.994	.016
B12	.941	.251	-.007	.078
B13	.255	.944	.041	-.011

From above rotation component matrix, we tried to identify the variables from the seventeen intangible variables. The maximum value in column of rotated component matrix (marked in RED color). The following factors are identified.

Factor 1	Factor 2	Factor 3	Factor 4
B 4 Goal setting	B10Labour saving	B11Less over time	B 7Faster access to information

(Note:We have found five factors from table no -2 and four factors from table no 3. Further, we will analysis association between table-no2 and table no3,which variable have more strong association between variables.)

RESEARCH METHODOLOGY

Research Methodology is a systematic path for research, which helps to reach the conclusion of research. Descriptive research methodology is used for this study. The

research methodology included steps of data collection primary data and secondary data, sample selection, formation of questionnaire, analyse of data by using SPSS and finally interpretation of the data.

Understanding the issue:-

The research had to be started by understanding the concepts of various type of training. Effectiveness of training, importance of training, employees' developments, retention of employees, employees' behaviours turning into organization loyalty, present assigned job satisfaction, motivation etc. Today market is all about competition   for achieving maximum profits, where training concepts becomes very serious issue. Through the literature review it was studies that training is one of the vital process for organization success and for achieving desired targets. Most of the organizational objectives are translated to the individual employees through training programs. The organizations involved employees for designing the programs.

Pre study

This was done by having an open conversation with the organizational training heads of ONGC and BPCL organisations This organization was chosen as it has major identity in the petroleum sectors. These organization are having Nratna status under PUS Government of India. Several organizational books and manuals were referred to understand the details.

The study concentrated both on primary and secondary data.

a) The secondary data would given detailed information on

i) Present training modules

ii) Fund allocation for training.

iii) Level of participation of employees.

iv) Core training programs.

b) The primary survey was critical component of the study as it would yield crucial data on the impact and value of training programs. Primary data was collected from

i)Middle management level

ii)Lower management level

iii)Staff level

Survey would give details on

1. Information about training programs and activities.

2. Comparative information of training programs and tangible and intangible factors.

For carrying out the study effectively. An instrument was used for the survey. The instrument used was a questionnaire. The questionnaire was prepared taking into consideration certain parameters such as

a) General informations.

b) Information related to training

c) Information about core training programs

d) Information of employees motivation, attitude towards training programs

e) Information of tangible and intangible effect from training.

f) Information of employees job satisfaction level

LIMITATION OF THE STUDY:

The study was carried out with some assumption regarding time, study area and sample size. As the organization chosen for study a public sector organizations hence there were a lot of initial hesitation for the employees to have open discussion, hence a lot time had to be devoted to gain their confidence in order to seek response

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ANNEXURE -1

FORM NO: A

Employee evaluation format (E.E.S) before training programs.
Program Title: - **Fire prevention and fire fighting.**
Employee profile
Name
Designation
Date of birth
Experience

   (A) Awareness   30 Marks

1. Oil fire can be controlled or extinguished by the following given below?   (5)

   (a) Dry chemical power (b) Water spray (c) Co2 (d) foam chemical

2. Electrical fire can control /extinguish by foam chemical?   (5)

(a) Yes   (b) No

3.Do you have information of fire fighting system and concepts?   (5)

(a)   Half Information   (b) Fire extinguisher location   (c) Fire fighting team (d) Full information

4. Are you aware of fire extinguisher location and emergency exit route?   (5)

(a) Yes   (b) No   (c) emergency route   (d) location

5. What are fire fighting system installed in your office/ field area/off-shore?(5)

(a) Dry Chemical (b) Foam chemical (c) co2 (d) water spray (e) gas detection sensor (g) All above

6. If you are stuck alone, can you operate any of the fire fighting system as   (5) mentioned above?

(a) Yes   (b) No   (c) can not say

(B)Technical expertise.   10Marks

(1) Experience on the job…………………….…. (Each year experience will calculate 2 marks and maximum 10marks).

(2) Have you attended this type of fire fighting event before? (Each event 5marks and maximum 15Marks)   15 marks

(a) one time   (b) two time   (d) three time   (e) Nil

(c) Do you belong to fire and safety department?   10 marks

(a)   Yes   (b) No.

(d) Do you acquire higher qualification in the fire and safety system?   5 Marks

(a) Yes   (b) No

(C) Competency   (10 marks)
 (1) Do you feel that after attending training your competence level increased?

(a)   Aim zero accident at work place   Yes/No

(b)   Increased self confidence level   Yes/No

(c)   Better performance   Yes/No

(d)   Good leadership quality   Yes/No

ANNEXURE -2

FORM B

Employee evaluation format (E.E.S) After training programs.
Employee profile:
Name
Designation
Date of birth
(A)Experiences

   1.Oil fire can be control or extinguish by the following given below?   (5)

      (b) Dry chemical power (b) Water spray (c) Co2 (d) foam chemical

2. Electrical fire can control /extinguish by foam chemical?   (5)

(a) Yes   (b) No

3.Do you have information of fire fighting system and concepts?   (5)

(a)   Half Information   (b) Fire extinguisher location   (c) Fire fighting team (d) Full information

4. Are you aware of fire extinguisher location and emergency exit route?   (5)

(a) Yes   (b) No   (c) emergency route   (d) location

5. What are fire fighting system installed in your office/ field area/off-shore?(5)

(a) Dry Chemical (b) Foam chemical (c) co2 (d) water spray (e) gas detection sensor (g) All above

6. If you are stuck alone, can you operate any of the fire fighting system as   (5) mentioned above?

(a) Yes   (b) No   (c) can not say

(B) Technical expertise:-10 marks
(1) Do you think that attending training can you plays participative role in case of fire control situation?
(a) Yes   (b) No   (c) Cannot say (10 marks)
 (2) Do you understand firefighting basic principle and its prevention?
(a) Yes   (b) No   (c) Cannot say (10 marks)
(3) Do you think that now you are in better position to identify type of fire and suitable fire extinguisher?
(a) Yes   (b) No   (c) Cannot say
(4) Will you wish to attend higher-level fire fighting training?   10 marks
(a) Yes   (b) No   (c) cannot say

(C) Competency   (10 marks each)
 (2) Do you feel that after attending training your competence level increased?

(e)   Aim zero accident at work place   Yes/No

(f)   Increased self confidence level   Yes/No

(g)   Better performance   Yes/No

(h)   Good leadership quality   Yes/No