



GOA UNIVERSITY
GOA BUSINESS SCHOOL
DEPARTMENT OF MANAGEMENT STUDIES (MBA)

Taleigao Plateau, Goa

FINAL REPORT

On

Analysis and Evaluation of Training Effectiveness using Kirkpatrick Model

Submitted by

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SYMBA - Part II

ROLL NO: 2045

BATCH: 2020 – 2022

AT



VEDANTA LIMITED - SESA GOA PIG IRON PLANT

(A Report submitted in partial fulfilment of the requirements of MBA Programme of
Goa Business School - Goa University)

Institution Guide

Professor Ms. Teja Khandolkar.

Organization Guide

Ms. Joy Afonso.

(Chief Human Resource Officer)

DECLARATION

I, Ms. Samiksha R Sawal, studying MBA second year part II at Goa University – Goa Business School, Taleigao – Goa, hereby declare that this project is genuine and original work of study prepared by me.

It is based on data and information collected by me during my internship at Vedanta limited - Sesa Goa, Amona, Pig Iron Plant.

A Study on Analysis and Evaluation of Training Effectiveness using Kirkpatrick Model Sesa Goa PIP Mining Industry and is submitted on partial fulfilment for the degree of Master of Business Administration at Goa University – Department of Management Studies – Taleigao - Goa.

This is the record of work done by me under the supervision of Professor Ms. Teja Khandolkar.

I further state that no part of this project report has been submitted for a degree or diploma or any other similar title of this to Goa University or any other Institute.

Date:09/05/2022

Name: Samiksha Sawal

Roll No: 2045

ACKNOWLEDGEMENT

I wish to express my gratitude to Vedanta Limited - Sesa Goa Pig Iron Plant - VAB unit for giving me an opportunity to be a part of their esteemed organization and enhance my knowledge by granting permission to do a summer internship under their guidance. I specially thank Ms. Joy Afonso (CHRO VAB Amona, Vedanta Limited), for her valuable time to guide me through the project. I also like to express my gratitude to my faculty guide Professor. Ms. Teja Khandolkar, the other faculties, my family and friends who helped me with their constant guidance and encouragement throughout the project.

Regards,

Samiksha Sawal.

CERTIFICATE OF INTERNSHIP



sesa goa iron ore

CERTIFICATE

This is to certify that **Ms. Samiksha Raghunath Sawal**, Goa Business School , Goa University , has undergone internship from 07th January 2022 to 30th April 2022 in HR department of Vedanta Limited, Value Added Business based out of Amona, Goa.

She has successfully completed the project work. The title of her project work is "Analysis and Evaluation of Training Effectiveness using Kirk Patrick Model". She has shown keen interest in learning and has enhanced her practical knowledge.

We wish her all the very best in her future endeavours.

With Best Wishes,
For Vedanta Limited

Joy Afonso
CHRO - VAB
30 April 2022

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Sensitivity: Public (CA)

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Introduction

Effective training is considered as an important factor in determining the efficiency of an organization which depends upon the capability of its employees. For training evaluation to be truly effective, the training and development itself must be appropriate for the person and the situation. Even though evaluation is listed at the last phase, evaluation actually happens during all the phases. It is used during the training process to evaluate the training process itself. Evaluation is not just for the trainer or organization it is absolutely important for the learner too. The purpose of this paper is to provide information to evaluate and improve the effectiveness of training. The complete L&D approach at Vedanta VAB helps in framing the L&D strategy. To achieve this, L&D is enabled by drivers to execute various initiatives. These initiatives are designed to cater to the needs of employees at all levels within the organization.

Organizations in both the private and public sectors, regardless of types or nature of organization, agree that training and development is essential to the growth and development of the business. Training is an essential human resource development (HRD) function of any organization. Training and development as a process that utilizes various methods to provide new and existing employees with the skills they need to perform the job.

Training is also viewed as a powerful agent for facilitating an organization's expansion, development of capabilities and improvement of profitability. In order to initiate more effective training, organizations need to look at how the Training and development system is aligned with the strategy of the organization and at what is being done to make sure that all training and development activities are effective. The evaluation of training effectiveness was strategically designed to tap four levels of training effectiveness: reaction, learning, behaviour and results accruing due to the program.

Effectiveness goes to the heart of what training and development are all about in an organization: giving employees the knowledge and skills they need to perform their jobs effectively. However, stated that training and development is an expensive investment. the contributions of training and development toward the organizations overall performance due to lack of evaluation. Training is "a planned by a company to facilitate employees' learning of job related competencies". Employee training has become increasingly important for organizations to improve service quality, decrease labour costs, increase productivity and profitability, and effectively manage workforce diversity.

Literature Review

1. According to Shelley Frost, Demand Media Training is a crucial component in preparing new employees for their positions and keeping existing employees current on critical information. To be effective, a training program needs a specific purpose with appropriate training methods. Understanding the factors that influence training programs enables you to develop or change your current employee education to make it fit the needs of your business and your employees
2. According to Henry Ongori (2011), Jennifer Chishamiso Nzonzo, training and development has become an issue of strategic importance. Although many scholars have conducted research on training and development practices in organizations in both developing and developed economies, it is worth mentioning that most of the research has concentrated on the benefits of training in general. There is however, limited focus on evaluation of training and development practices in organizations.
3. According to Haslinda ABDULLAH (2009), the challenges faced by employers and organizations in the effective management of HR T&D varied from concerns about the lack of intellectual HR professionals to coping with the demand for knowledge-workers and fostering learning and development in the workplace. The core and focal challenge is the lack of intellectual HRD professionals in manufacturing firms, and this suggests that employers viewed HR T&D as a function secondary to HRM and perhaps considered it as being of lesser importance. This implication could lead to the ineffective implementation of HR T&D activities and increase ambiguity and failure in effectively managing HR T&D as a whole.

COMPANY ANALYSIS



Vedanta Limited is an Indian multinational mining company headquartered in Mumbai, India, with its main operations in iron ore, gold and aluminium mines in Goa, Karnataka, Rajasthan and Odisha.

A subsidiary of Vedanta Resources Limited, is one of the world's leading Oil & Gas and Metals company with significant operations in Oil & Gas, Zinc, Lead, Silver, Copper, Iron Ore, Steel, and Aluminium & Power across India, South Africa and Namibia.

Products of Vedanta are - Pig iron, Metallurgical coal, Iron ore, Zinc Lead Silver, Copper, Aluminium, Power, Oil & Gas.

Vedanta strategy is based pillars:

1. Growth

Vedanta continue to deliver growth and generate significant value for shareholders on a sustainable basis. Moreover, the organic growth pipeline is strong as company seek to continue to deliver significant growth for shareholders in the future. Company have pursued growth across all businesses and into new areas; always on the basis that value must be delivered.

2. Excellence

Achieving excellence in all that the company do is the way of life. Vedanta strive to consistently deliver projects ahead of time at industry leading costs of construction and within budget. Company is constantly focused on achieving a top decile cost of production in each of the businesses. To achieve this, they follow aculture of best practice benchmarking.

3. Long-term value

Reduce rearing from increasing free cash flow.

Vedanta aim to optimize the cost and operational performance through a culture of continuous

improvement to achieve and maintain a low cost position in all the businesses.

1 Focus Areas

Maintain positive FCF despite current market volatility, Renew efforts to reduce net gearing in the medium term from current higher levels post impairments. Efficiency refinance upcoming maturities.

2 Sustainability



Vedanta practice sustainability within the framework of well-defined governance structures and policies and with the demonstrated commitment of the management and employees. Vedanta aim not only to minimize damage to the environment from our project but to make a net positive impact on the environment where they work.

SWOT ANALYSIS

Strengths

- Highly diversified business.
- Captive power generation units.
- Popular with the end consumers - very high brand recall.
- Strong assets - owns mines and manufacturing units in India and abroad.
- Strong financial position.
- Strong Annual EPS Growth
- Promoters increasing shareholding QoQ

Weaknesses

- Name involved in alleged illegal mining practices.
- Government intervention causes operational efficiency.
- Decline in Net Profit with falling Profit Margin (QoQ)

Opportunities

- Development of nearby region to improve brand image among people.
- Worldwide expansion through london headquarters
- Highest Recovery from 52 Week Low

Threats

- Regulatory threats.
- Dwindling natural resources.
- Better brand image of competitors.
- Firms linked to ongoing regulatory investigations/ legal cases

VRIO ANALYSIS

Resources/ Capabilities	Valuable	Rare	Imitable	Organisation	Competitive Advantage
Positive Market Reputation	Yes	Yes	Yes	Yes	Long Term Competitive Advantage
Leadership Team	Yes	Yes	No	Yes	Strong Competitive Advantage
Awareness of Brand	Yes	Yes	No	Yes	Sustainable Advantage
High Customer Rating	Yes	Yes	Yes	Yes	Sustainable Competitive Advantage

PORTER'S FIVE FORCES

The Mining industry in India is a major economic activity which contributes significantly to the economy of India.

ANALYSIS Threat of New Entrants:

The threat of new entrants to this industry is very low as a very high capital investment is required. It is very difficult for new entrants to venture in this industry because of the limited resources in mining and the costs of exploration, the various government laws, the equipment required, additional costs incurred in rehabilitation of people living at the mining sites etc.

Threat of Substitutes:

The threat of substitutes also is low. This is mainly because metals are required basically for all types of manufacturing industries as an input. Even if substitution is considered, it has limited scope. Also the price/performance ratios of iron, aluminium etc is low, making the threat of substitutes even less.

Bargaining Power of Suppliers:

The suppliers include the suppliers of raw materials required, that of equipment etc. The bargaining power is very high because there are very few suppliers. Also the cost of switching suppliers is high making it difficult to do so. Companies has entered into long term contracts with their suppliers, thus reducing the costs. It also ensures that companies get supply of goods without being affected by market fluctuations.

Bargaining Power of Buyers:

This is low as the demand of the metals and metal products is very high. Also switching costs are high as the costumers normally have contracts with the company.

Competitive Rivalry:

Some of the competitors of Vedanta Group are Hind Zinc, Hind Copper, Gravita India, Bharat Wire Rop, Madhav Copper, Rio-Tinto, BHP Billiton Ltd, Grupo- Mexico, Hindalco etc. The competition is intense as every player is trying for their market share as the resources are becoming restricted and limited.

Analysis

Comparison of Sesa Vedanta -Goa Ltd. with its closest peer in the mining industry conveys that competition in the market is high. There are many major players who are giving tough competition to Sesa Vedanta goa, thus, Interest rate makes a major impact. Not all countries are rich in deposits of minerals; hence mining generally involves import and export of product. The exchange rates fluctuation are a dominant concern the import taxes and international trade cycle are also important economic factors for the mining industry.

PESTEL ANALYSIS

Political & Legal:

Difficulty in obtaining clearances and leases from the state governments. There are various clearances which need to be obtained from different ministries stated below which is a cumbersome and time consuming process: Department of Mines, Indian Bureau of Mines, Goa State Pollution Control Board , Geological Survey of India , Ministry of environmental and forests, Central Board of Excise and Customs, Ministry of labor.

Minerals are seen as a nation's wealth, the mining industry has to operate under a lot of political and legal pressure. It involves a large and complicated process for licensing because they are mainly state owned or nationalized. The industry is very much regulated by governmental law that mainly focuses on labour and environmental factors. The government has been pressurizing the mining policies due to the increasing concern of environmental issues and the media focus is still more an added pressure for the mining industry.

Economic:

The fluctuations in the exchange rates impact the performance of the mining Industry. Indian iron ore industry thrives on exports. Goa exports 96% of its iron ore production and 84% of revenues is accounted for by exports to China.

Social:

Support of the local community is most needed and underlying factors for mining because the industry impacts the surrounding environment in area of its operation. Mining, though, a resource based

industry, cannot be carried out in areas of high population because of the concerns that it may affect the public health.

Technology:

There are no exploration programs undertaken for locating new additional deposits of iron ore in India. Many technological improvements have helped the mining industry in cost controls, emission controls, and mineral conservation and in bringing down the alumina content of the ore.

Government Policies

The first National Mineral Policy (NMP) was enunciated by the Government in 1993 for liberalization of the mining sector. The National Mineral Policy, 1993 aimed at encouraging the flow of private investment and introduction of state-of-the-art technology in exploration and mining. Although the liberalization of the mineral sector is now over a decade old, the results have not been encouraging.

Introduction to Training and Development

In line with Vedanta core purpose and mission statements, L&D philosophy focuses on creating a conducive environment for a high performance culture, driving excellence and innovation through various capability building innovation. With this objective in mind training and development programme have been strategized to suit the needs of the business.

Training and Development Techniques followed at Vedanta VAB

Internal

Internal training: The department head nominates the employees based on the determined gap, performance level and talent development. Internal training is also done to create a motivated, skilled and effective workforce through which the organisation can achieve its goals. The faculty for training is fixed and communication is sent to all internal training coordinators.

Subject Matter Experts: A subject Matter expert is an authority in a particular area or topic, is one with detailed knowledge and understanding on a particular topic or specialized skills/ technology /process / machine. The subject matter expert should provide the knowledge and expertise in a specific subject, business area, or technical area for a project/program. The process of identifying SME to be carried out once in every two years or moving out of all identified SME's from organization whichever is earlier. They help in internal training and in-house training programs on regular basis.

Train the Trainer – Vedanta have a pool of internal trainers for each of the technical subjects like Pig Iron, Met Coke, and Maintenance etc. They undergo "Train the Trainer" program for developing skills as trainer.

Kaizen - It is a forum where the employees actively participate and initiate new ideas and improvement projects. This process is applicable to contractual workmen also. Based on the impact of the ideas that is reviewed by the leaders, it is uploaded in the Share point based e- platform and award is given. Inputs generated so far are incorporated to design and develop the training program. Various methods are used like structure led training, simulations, and business games, experiential learning, exposure visits, online/e learning etc.

Business Excellence training - Business excellence training is hands-on, experimental and interactive where Vedanta leadership team participates to improve the practices and benchmarking prevailing in the organisation. Leaders convey to the employees by group discussions, portal. Safety training: Safety training is given to all contract employees PEP talk is given to contract employees daily by the supervisor. It is mandatory for all employees to undergo safety training during the induction course.

External

External Training: The nomination from the department head is received and the training brochure is passed across the departments. The employees are sent to institutes for training and after the training they should deliver a presentation to the department within two months. Dale Carnegie is the partner for leadership coaching for senior, middle level and young employees. We also deploy OEMS (Original Equipment Manufacturers) and 33 External Knowledge Partners like ABS Technical Services, CII, Siemens, EVAC, IROS, SGS, AON Hewitt, KPMG, YSC, CETC, Star Consulting etc. suitably for the technical, functional and behavioural training.

Online Training - E learning - Training through Udemy & Skillsoft are provided for various topics like Train the Trainer, Project Management, Marketing Management etc. This helps in fast moving world, where one can learn anytime and anywhere. They are given fixed timelines to complete the program.

Technical Training Institutes: CII, Green Triangle, Safety Council of India, AsKEHS are some of the training institutes which enables us to conduct trainings on Technical and HSE on external from.

Also have initiatives like One Vedanta and Knowledge sharing from corporate level to all employee to know about the company and industry as much as possible.

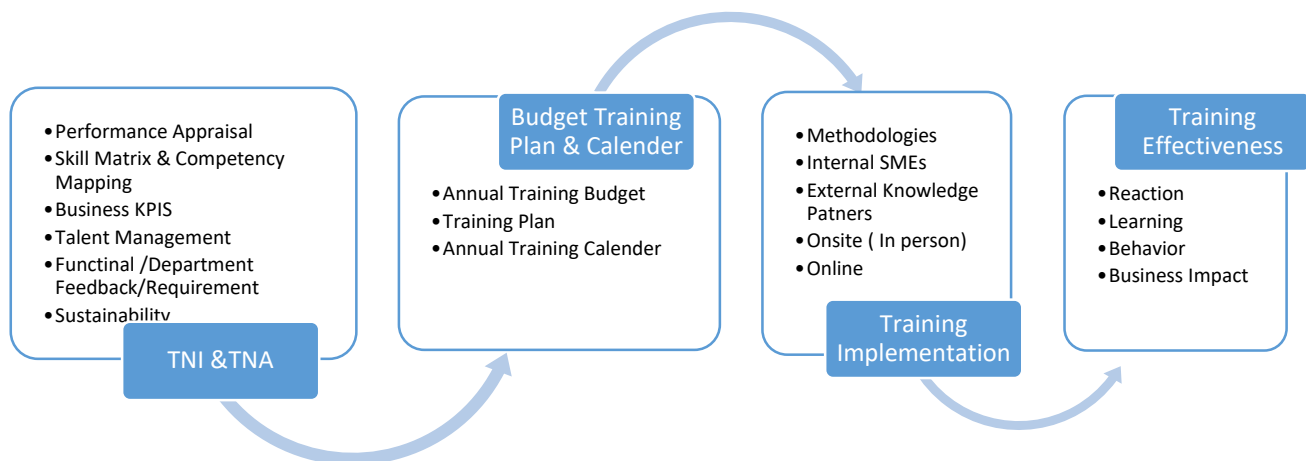
Initiatives to enhance people competencies & leverage it to ensure future employability & mobility across functional, geographical & business requirements?

Annual training calendar is made according to the need of the individual, training is done with the help of trainers to enhance the skill of the employee. Safety training is also an integral part of the program. Training calendar is broadly classified into two categories: Individual training for achieving his/her short term objectives categorized into two (behavioural and technical) and Organizational training for achieving long term objectives VAB also initiate tie-ups with major institutes for technical training

program and management development program for senior management. The focus areas in training are

1. Induction and Orientation Training ,On the Job Training: Expansion, New Applications, and Business Tools. Skill and Multi Skilling
2. Technical Training, Level-wise and Career
3. Managerial development stage, competency development, mentoring.

HR Strategy	Performance Management System	Skill and Competency Mapping	Vedanta Sustainability Framework	360 Assessment – Management level & Coaching Feedback	Induction and Monitoring Feedback	Satisfaction Survey Report	Exit Analysis	Community Feedback
Inputs For L&D Processes which, helps achieve the L&D Strategy								



Analysis and Evaluation of Training Effectiveness using Kirkpatrick Model

Training can be stated as the methods which are imparted to the employee in fulfilling the organizational goals. Organizations involving in the evaluation of training effectiveness are not only responsible for what the employees learn but they need to see that the knowledge which the employee gained is being applicable in their work performance.so, Training and its regular evaluation would definitely make an organization to stand in the lime light in achieving the objectives. Vedanta invest huge amounts for their employee training

Training evaluation using Kirkpatrick's Four – Level Training Evaluation Model.

This is the best method for evaluating the training effectiveness and widely accepted and followed by many organizations. Kirkpatrick's Training Evaluation Model consists of Four-Levels.

According to this model evaluation should always start from the basic level and further evaluation of other levels would be done basing on the need for the situation.

The four levels include: -

Reaction - This determines how the reaction of the trainees during the training process.

Learning - the extent to which the learners gain knowledge and skills

Behaviour - capability to perform the learned skills while on the job

Results - includes such items as monetary, efficiency, moral, etc.



Assumptions: - There are three problematic assumptions of the Kirkpatrick model:

- 1) the levels are not arranged in ascending order,
- 2) the levels are not causally linked, and
- 3) the levels are positively inter-correlated.

PROJECT QUESTIONS.

Kirkpatrick model evaluation is done to find - What is The Effectiveness of Training on four levels (Reactions, Learning, Behavior and result)?

Q1. Trainees find the training engaging, favorable, and relevant to their jobs? (Training Feedback)

Q2. Do Trainees acquire the intended knowledge, skills, attitude confidence and commitment to the training? (Pre test , Post Test)

Q3. Whether Trainees were truly impacted by the learning and if they're applying what they learn? (Behaviour Feedback)

Q4. What was the return on investment?

PROJECT METHODOLOGY

1. Sampling design- Primary data collection: data collected through survey and questionnaires.
Secondary

data collection: data collected through industry profile, journals, and reports in website.

2. Data analysis tool -Data analyzed and validated by used Excel and Jamovi software to compute various statistical

values wherever it is necessary. Suitable diagrams are used to exhibit the analyzed data.

3. Area of the study- VAB.

4. Sample size- 68 employees.

5. Sample unit- Employees of mining industry.

DATA COLLECTION - The data collected & used for this report will be existing data from HR Department maintained by Vedanta, Sesa Goa Amona PIP - I.

- The data is taken from employees who attended training as per the training need identification.

PROJECT DESIGN

The project design in this study was descriptive- survey. The study aims at focusing on the nature of the training courses and their impact on the improvement of employees' performance. The data used in the study were collected through HR department Learning and development manager and through questionnaires. The questionnaires were distributed among subjects.

The research design utilized in the study was descriptive research design. The structured questionnaire is framed by predetermined way for the research study. The scales used to evaluate the data are: Likert five-point scale (where 1. Poor, 2. Satisfactory, 3. Good, 4. Very Good5. Excellent) and Categorical scale.

Total 3 Questionnaire 1. Training Feedback (by Trainee) 2. Pre-test Post-test Questionnaire, 3. Behaviour Feedback (Review feedback by Supervisor)

1st Training Feedback questionnaire consist of 21 Questions. 2nd Pre-test post-test consist of 10 questions and 3rd questionnaire consist of 11 Questions.

The data collated using excel and Jamovi software. The measures were standardized through computation of reliability. Total average analysis to know the feedback effectiveness, T test, gives the same results, using Jamovi Analysis was applied to know the relationship between the Training effectiveness and Employee performance.

PROJECT OBJECTIVES

The objectives of the study are as follows:

1. Analyze and Evaluate Effectiveness of Training at Vedanta, Sesa Goa Ltd, VAB - by using Kirkpatrick Model.
2. To study the effectiveness of training programme in mining industry.
3. To know the satisfaction level of employees towards training programme.

PROJECT HYPOTHESES

Does training effectiveness influence the Employee Performance?

Null hypothesis (H0): - There is no relationship between training effectiveness and Employee performance

Alternative hypothesis (H1): - There is a relationship between training effectiveness and Employee performance

Project Limitations

1. The Kirkpatrick Level one and two evaluations of reaction and learning can be evaluated in the Learning Zones.
2. The Kirkpatrick Level three and four evaluations of behaviour and results respectively have to be evaluated back at the operation during implementation of projects.
3. Due to job rotation it is difficult to understand from whom to take behaviour test.
4. Return on investment cannot be majored over a specific time.
5. Behaviour test cannot be majored using one single technique.

PROJECT / DATA FINDINGS

Table 1.0 tabulates the profile of all the 68 employees that had responded to the survey. A total of 13 respondents attended training on communicate effectively and presenting with impact. 12 respondents attended Dynamic Divas training. 25 respondents attended Aspect/ Impact training and 18 respondents attended Behaviour Safety Training. Total respondents are 68.

Table 1.0 Training programme and General Characteristics of Respondents

Name of Training programme	No of Trainee / Respondents
Communicate effectively and presenting with impact	13
Dynamic Divas	12
Aspect / Impact	25
Behaviour Safety	18
Sample size	68

1. FEEDBACK ANALYSIS

Analysis – Training effectiveness is majored on reliability analysis which shows mean, standard deviation and Cronbach,s a and Correlation Heatmap is used.

2. Reliability Analysis

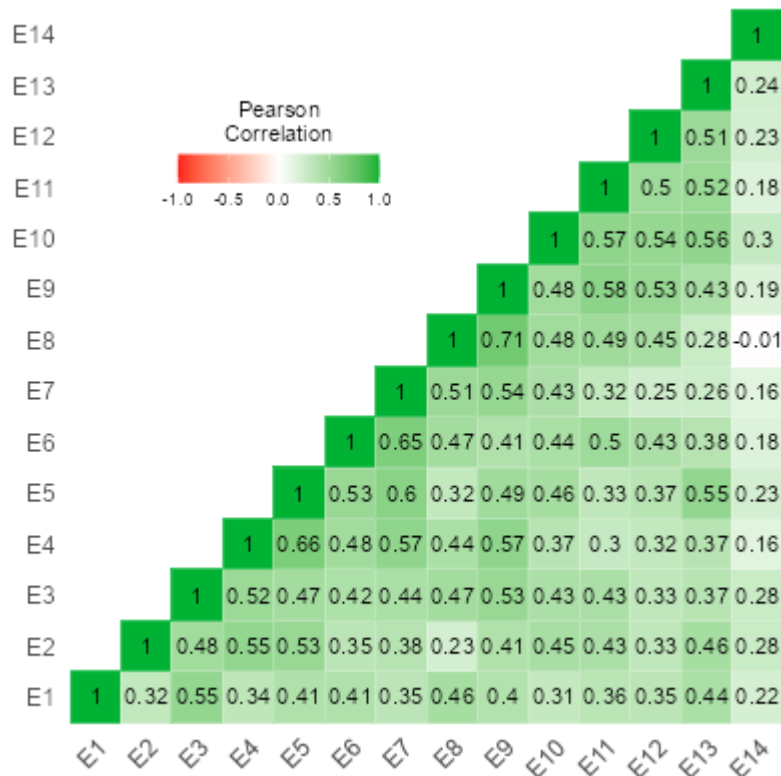
In Table 2.0 below, reliability analysis was conducted for the Training Feedback Questionnaire. The Cronbach's alpha is 0.905 which means a more stable and reliability of measurement. The alpha coefficient for the fourteen items is 0.905, suggesting that the items have relatively high internal consistency.

Table 2.0 Reliability analysis of training feedback

Scale Reliability Statistics							
		Mean		Sd		Cronbach's α	
Scale		4.41		0.492		0.905	
Item Reliability Statistics							
				if item dropped			
				Cronbach's α			
E1				0.900			
E2				0.898			
E3				0.896			
E4				0.896			
E5				0.895			
E6				0.897			
E7				0.897			
E8				0.898			
E9				0.893			
E10				0.896			
E11				0.898			
E12				0.899			
E13				0.898			
E14				0.912			

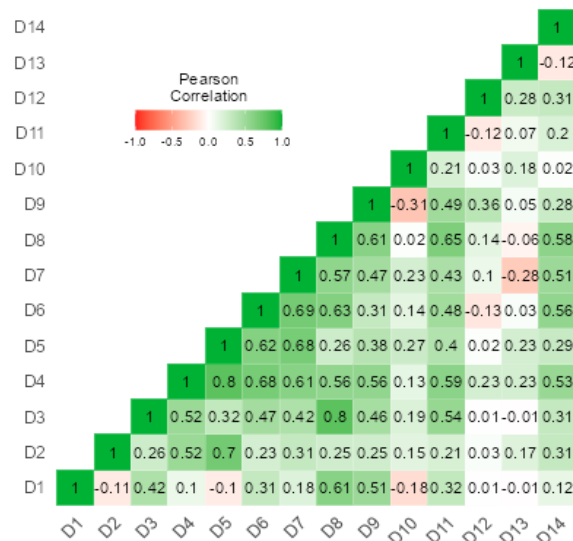
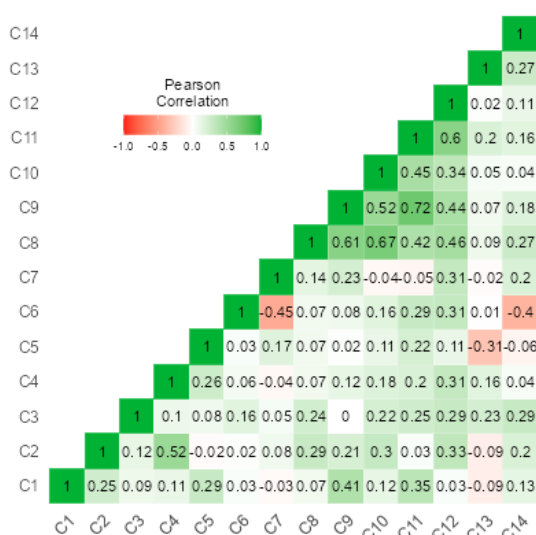
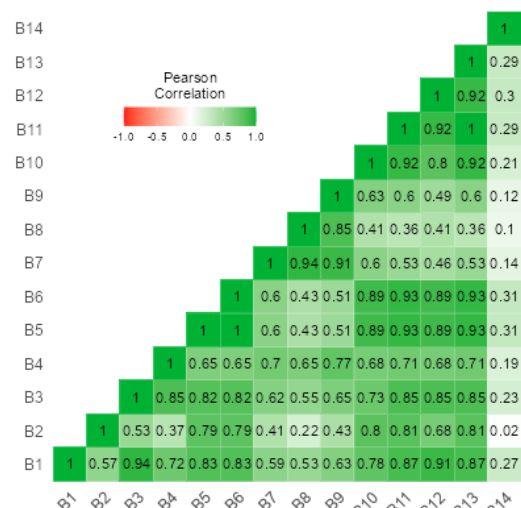
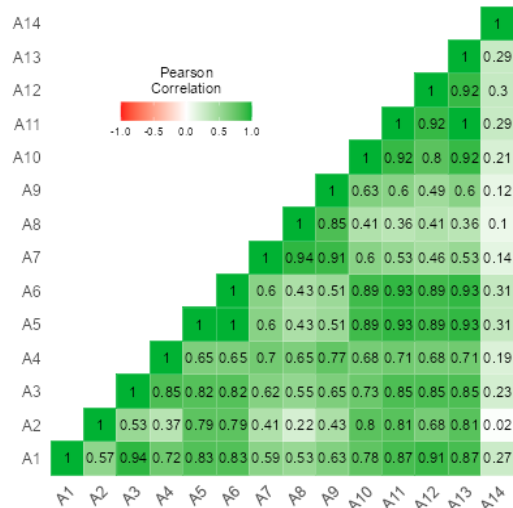
3. Correlation Heatmap

The above correlation heat map shows positive outcome training program, Training feedback correlates with Training outcome. Trainees find the training engaging, favourable, and relevant to their jobs. Correlation heatmap which represents Pearson Correlation (comparison of four training programme).



Interprtation - Correlation Heatmap – It measures the relationship between variables that are as below
– E1 To E 14 represents 14 questions

From the Pearson Correlation it is found that Correlation is 1 which represents positive relationship between training effectiveness and employee performance.



Interpretation Correlation Heatmap of 4 training programmes separately where A1 represents Training – Communicate effectively and presenting with impact. B1 represents Dynamic Divas, C1 represents Aspect and impact and D1 represent Behaviour safety. Pearson Correlation is 1 which over all 4 trainings which represents positive correlation between - Training feedback and training effectiveness.

As per above pearson correlation Trainees find the training engaging, favourable, and relevant to their jobs.

Pre-test – Post-Test Evaluation

Paired Samples T-Test

Paired Samples T-Test

								95% Confidence Interval			
			Statistic	Df	P	Mean difference	SE difference	Lower	Upper		Effect Size
Pre – test	Post Test	Student's t	-20.8	67.0	< .001	-3.68	0.177	-4.03	-3.32	Cohen's d	-2.52

Normality Test (Shapiro-Wilk)

				W		P	
Pre – test	-	Post Test		0.951		0.009	

Note. A low p-value suggests a violation of the assumption of normality

Descriptives

	N	Mean	Median	SD	SE
Pre – test	68	3.66	3.00	1.33	0.162
Post Test	68	7.34	8.00	1.64	0.198

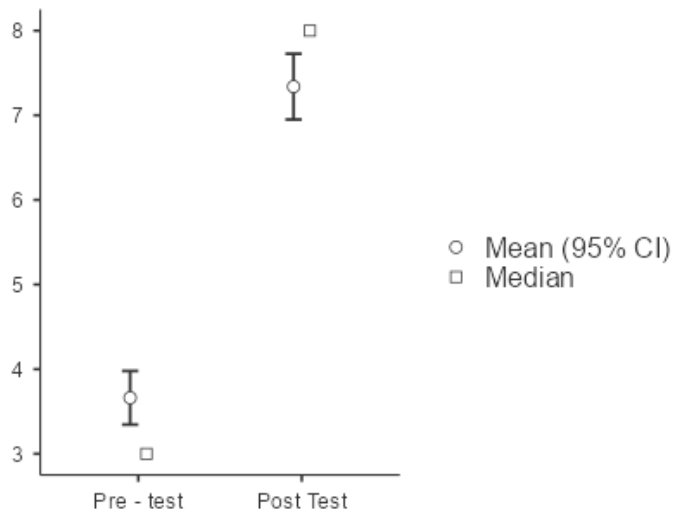
Interpretation of the table 5.0 The output indicates that the mean for the pre-test 3.66 and for the post – test is 7.34.the average difference between pre test and post test is -3.68. If the P value is less than significance level, the difference does not equal to zero.

Because p-value is .001 is less than the standard significance level of 0.05, reject the null hypothesis.

The negative values reflect that the fact that pre test has lower mean then post test (pre- test - post-test < 0).

If high scores are better, then the post-test scores are significantly better than the pre-test score.

1 Plots



2 Pre - test - Post Test

Interpretation – Table 7.0 - parallel line pre-test and post-test does not overlap on a scale it proves that there is a significant difference between pre-test and post-test. There is a difference in the pre-test and post test score.

Table 5.0 Discriptive Statistics of (Pre-test and Post test)

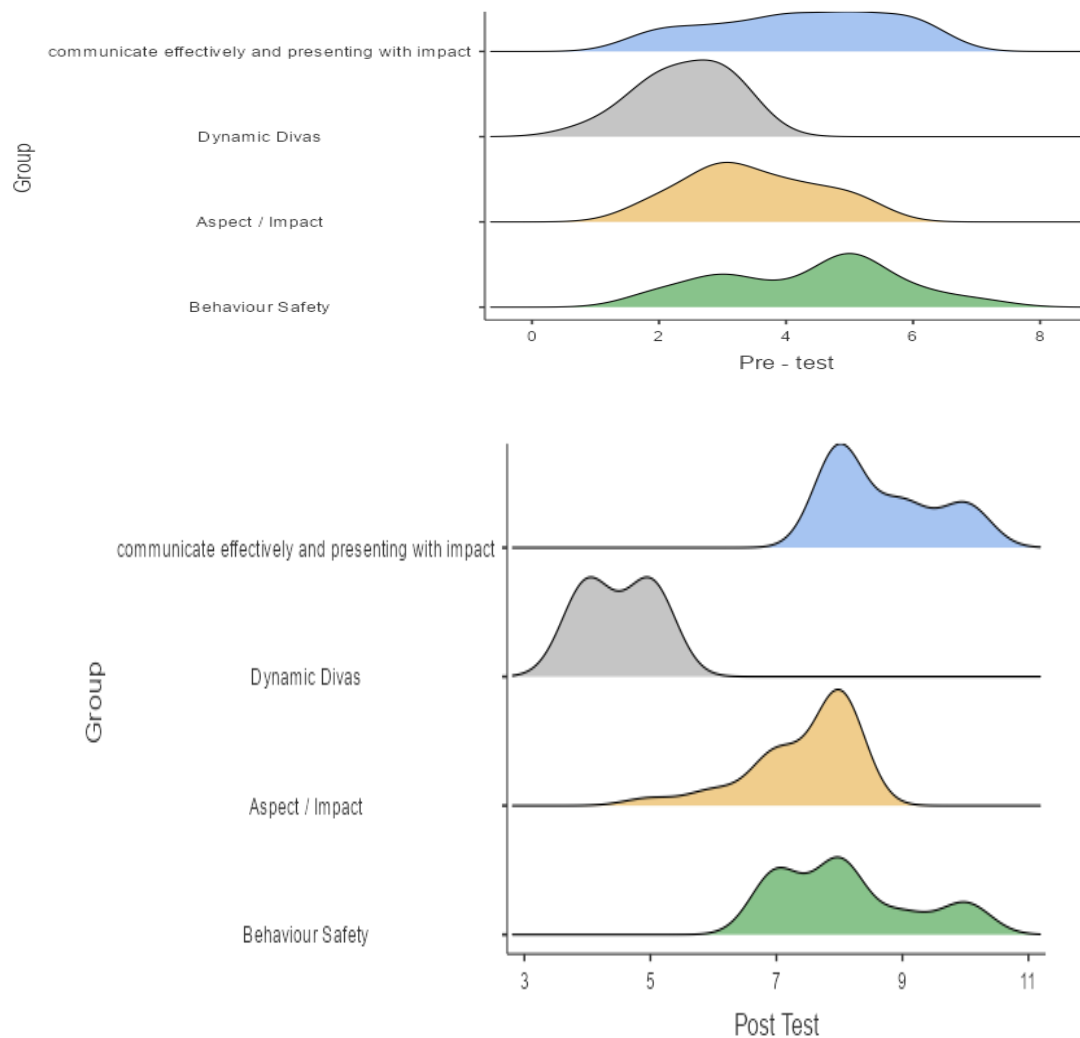
Descriptives Statistics					
	Group	Pre – test	Post Test		
N	communicate effectively and presenting with impact	13	13		
	Dynamic Divas	12	12		
	Aspect / Impact	25	25		
	Behaviour Safety	18	18		
Missing	communicate effectively and presenting with impact	0	0		
	Dynamic Divas	0	0		
	Aspect / Impact	0	0		
	Behaviour Safety	0	0		
Mean	communicate effectively and presenting with impact	4.23	8.69		
	Dynamic Divas	2.42	4.50		
	Aspect / Impact	3.48	7.44		
	Behaviour Safety	4.33	8.11		
Median	communicate effectively and presenting with impact	4	8		
	Dynamic Divas	2.50	4.50		
	Aspect / Impact	3	8		
	Behaviour Safety	5.00	8.00		
Standard deviation	communicate effectively and presenting with impact	1.42	0.855		
	Dynamic Divas	0.669	0.522		

	Aspect / Impact	1.00	0.821
	Behaviour Safety	1.41	1.08
Minimum	communicate effectively and presenting with impact	2	8
	Dynamic Divas	1	4
	Aspect / Impact	2	5
	Behaviour Safety	2	7
Maximum	communicate effectively and presenting with impact	6	10
	Dynamic Divas	3	5
	Aspect / Impact	5	8
	Behaviour Safety	7	10

Interpretation on Table Descriptive statistics in the table 5.0 summarize the characteristics of sample data –

1. N The number of non – missing values in the sample that is 13,12,25,18 for both pre-test and post-test.
2. N* - Missing Value - 0
3. Min – The minimum is the smallest value of the data – pre-test is 2,1,2, 2, and post-test is 8,4,5,7.
4. Mean – The average of the data, which is the sum of all the observations divided by the number of observations. – pre - test is 4.23, 2.42,3.48,4.33 and post- test is 8,69, 4.50,7.44, 8.11.
5. Median – The midpoint of the data set. Pre-test – 4,2.50,3,5.00 and Post- Test is 8,4.50,8, 8.00.

Pre – test Post-test Plots.



Interpretation of curve plot of pre- test and post-test for 4 trainings that is – communicating effectively and presenting with impact, Dynamic Divas, Aspect/Impact, Behaviour Safety in plot 1 S above is larger than S below that mean skewness is positive. This typically means that right hand tail will be longer than the left hand tail.

Question 3. Whether Trainees were truly impacted by the learning and if they're applying what they learn? (Behaviour Feedback)

Rating Scale	Rating Sacle
1.Poor	1
2. Satisfactory	2
3.Good	3
4. Very Good	4
5. Excellent	5
Blanks	0

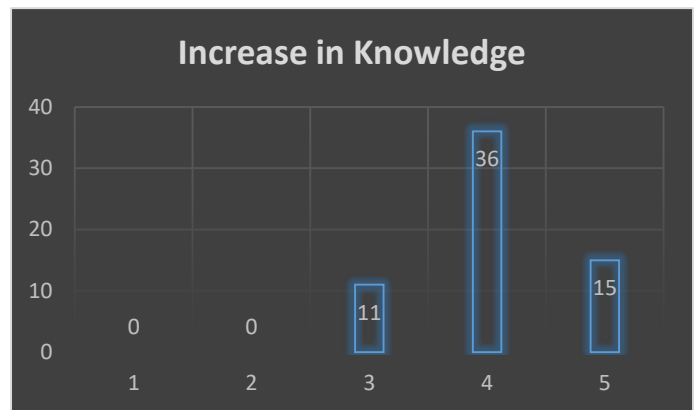
Q1. Increase in Knowledge

Interpretation - 11 respondents voted for Good - 3

36 respondents voted for Very Good - 4

15 respondents voted for Excellent - 5

6 respondents reporting supervisors were on leave.



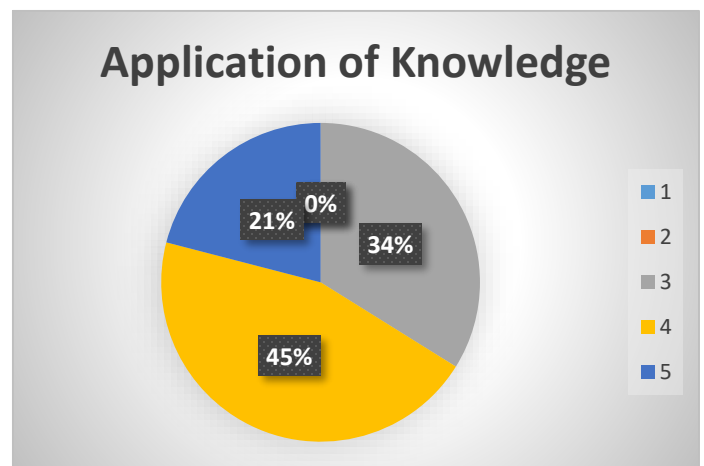
Q2. Application of Knowledge

Interpretation – 21 respondents voted for Good

28 respondents voted for Very Good.

13 respondents voted for Excellent.

6 respondents reporting supervisors were on leave.



Q3. Increase in performance with regard to job respectively.

Interpretation – 16 respondents voted for Good

31 respondents voted for Very Good.

15 respondents voted for Excellent.

6 respondents reporting supervisors were on leave.



Q4. Sustenance and persistence of knowledge & respectively.

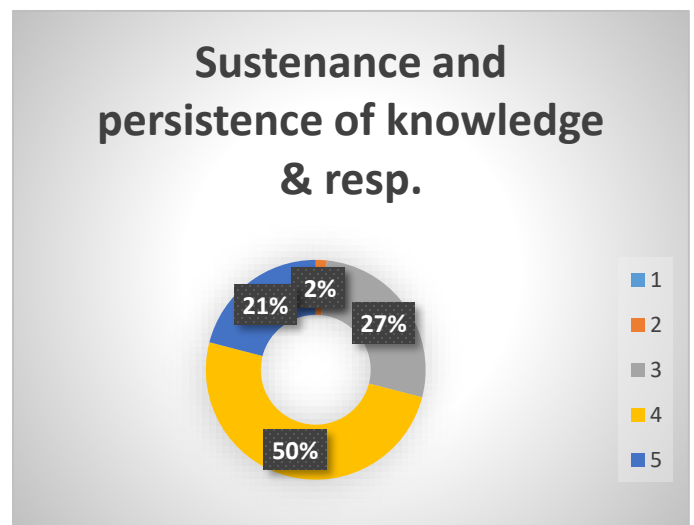
Interpretation – 1 respondent voted for Satisfactory

17 respondents voted for Good

31 respondents voted for Very Good.

13 respondents voted for Excellent.

6 respondents reporting supervisors were on leave.



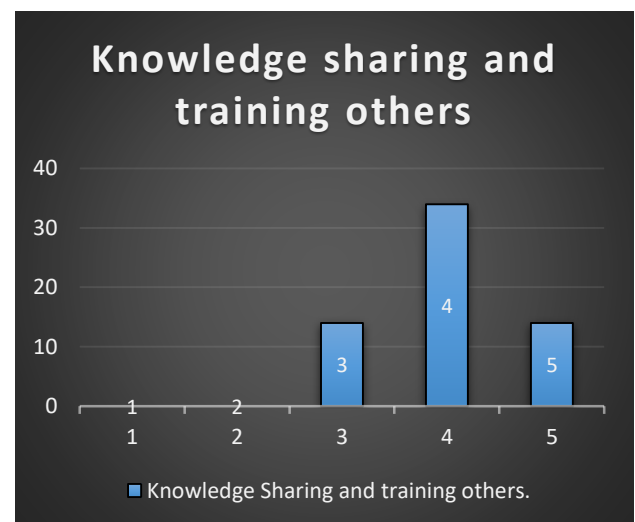
Q5. Knowledge Sharing and training others.

14 respondents voted for Good

34 respondents voted for Very Good.

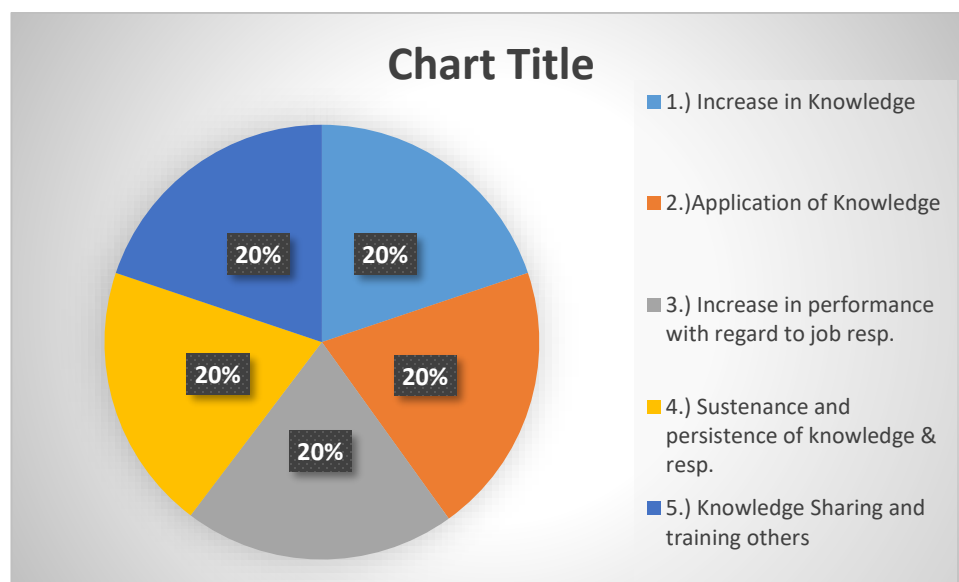
14 respondents voted for Excellent.

6 respondents reporting supervisors were on leave.



Behaviour Feedback total Average

Parameters	Average
1.) Increase in Knowledge	3.571428571
2.)Application of Knowledge	3.642857143
3.) Increase in performance with regard to job resp.	3.642857143
4.) Sustenance and persistence of knowledge & resp.	3.571428571
5.) Knowledge Sharing and training others	3.571428571
Total Averde of Behaviour Training	3.6




Q4. What was Return on Investment?

<i>Name of the Training</i>	<i>Date of Training</i>	<i>Mandays</i>	<i>Attended By</i>	<i>Emp Code</i>	<i>ROI</i>
<i>Operational Excellence and BP Workshop cum Leadership Session</i>	27.01.2021	16 hours	Umesh Khade	7572	Total FIP Savings certified by Finance :13 crores incentive paid to employees in Oct 2021 Salary
			Adhip Pai	7553	
			Sanjeev Tiwari	50591	
			Sanjyot Borkar	7408	
<i>Business Acumen and Strategic Marketing</i>	15.04.2021 29.04.2021	23 hours	Vicky Andrade	584	Total FIP Savings certified by Finance :2.87 crores incentive paid to employees in Oct 2021 Salary
<i>Production Planning & Resource allocation HIRA RCA</i>	26.05.2021 28.05.2021 29.05.2021	5.25 hours	Rajaram Khaunte	15230	Total FIP Savings certified by Finance :3.85 crores incentive paid to employees in Oct 2021 Salary
<i>Business Acumen</i>	15.04.2021	8 hours	Chirag Gupta	51171	Total FIP Savings certified by Finance :1.03 crores incentive paid to employees in Oct 2021 Salary
<i>RCA CI (Quality Circle and QC Tools) and Six Sigma</i>	26.04.2021 30.06.2021 11.08.2021	4 Hours	Nitesh Shirodkar	7577	Total FIP Savings certified by Finance :0.7 crores incentive paid to employees

					in Oct 2021 Salary
<i>Strategic Marketing</i>	29.04.2021	15 hours	G Rajesh	535	Total FIP Savings certified by Finance :3.04 crores incentive paid to employees in Oct 2021 Salary
<i>Production Planning & Resource allocation</i>	28.05.2021	2.25 hours	Sanju Gunga	7619	Total FIP Savings certified by Finance :0.36 crores incentive paid to employees in Oct 2021 Salary
<i>Production Planning & Resource allocation, RCA,CI (Quality Circle and QC Tools)</i>	26.05.2021 29.05.2021 11.08.2021	4.25 hours	Mohanda s Sawant	7548	Total FIP Savings certified by Finance :0.65 crores incentive paid to employees in Oct 2021 Salary

- PROJECT UNDERTAKEN BY EMPLOYEES AFTER ATTENDING TRAINING AND WAS ABLE TO INCREASE THE OUTCOME.




INNOVATION IDEA : SESA/VAB/001

LOW BASICITY SINTER FOR OPTIMIZING LOW GRADE LOCAL ORE

Due to high silica content in Iron Ore Fines, Fe % in sinter product use to decrease in order to maintain basicity which was impacting the productivity of blast furnace. So in Order to upgrade the Fe content of sinter & productivity of blast furnace. Initiative was taken to reduce basicity of sinter to 1.30-1.40 without impacting the physical qualities of sinter such tumbler Index, RI & AI

BEFORE

Due to high silica content in Goa Iron Ore Fines, Fe % in sinter product use to decrease in order to maintain basicity which was impacting the productivity of blast furnace

AFTER

With this innovation of low basicity, we are able to maintain sinter Fe with maximum usage of Goan local fines. Which helped blast furnace to maintain its productivity

OUTCOME :

With increase in 1.5% fe we have approx. monthly savings of 0.20 Crores from production and 0.69 Crs. from fuel rate.Total Savings - INR 10.7 Crs.

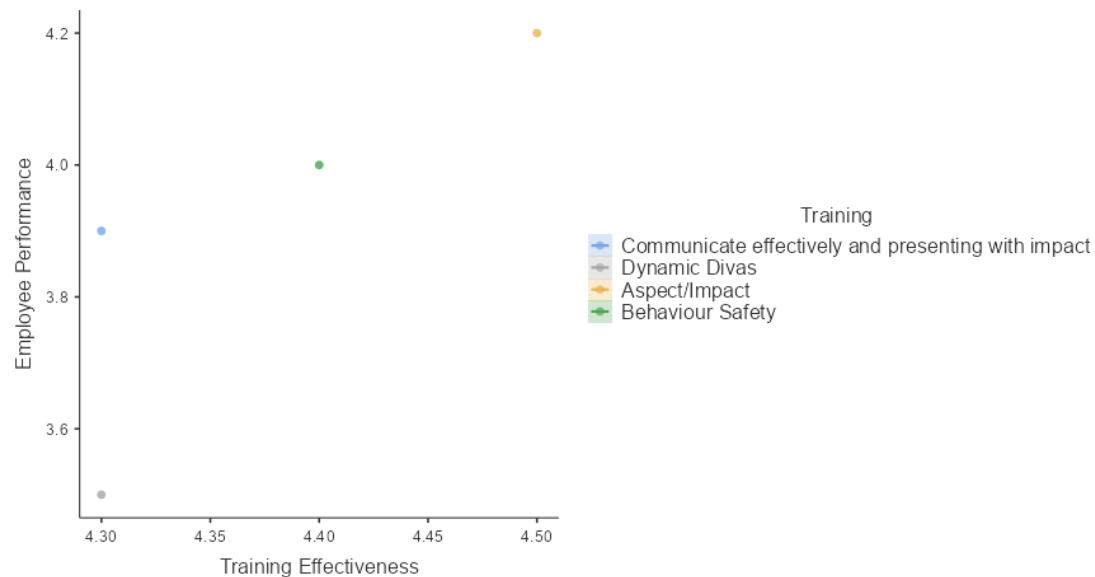
TEAM :

Kudos to Team 'Sinter Plant Operations' headed by Sanjeev Tiwari and the other team members Mr. Vijay Khanzode and Mr. Nitesh Nirala on this stupendous achievement.

INVOLVE | INNOVATE | IMPROVE

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To investigate whether and how one variable (Training effectiveness TE) influences the dependent variable under study defined as (Employee performance EP). The research hypothesis is that the independent variable (TE) explains the variation in variable (EP) and this explanation is statistically significant.



Interpretation – Training effectiveness and employee performance shows a positive outcome.

PROJECT LEARNING

- Learned in detail about Learning and development initiative planned by the organization
- Learned about Benchmarking - Finding and implementing best practices that lead to superior performance almost all organisation do benchmarking to understand the trends in the market. Organization do Benchmarking to know Better awareness of Ourselves (Us) What we are doing, How we are doing it, How well we are doing it, Better awareness of the Best (Them), What they are doing, How they are doing it, How well they are doing it
- Learned the importance of Time Management.
- Received first project on Benchmarking of best women practices - Which included comparing competitors and finding out few best practices.
- I got an opportunity to organise and participate in women's day programme.
- I was also able to understand the labour law and HR practices at Sesa Amona.
- I was given 2nd project that is benchmarking of best HR practices in mining (production industry) with other organization. Which included comparison of company policies with the competitors.
- My main project to find training effectiveness using Kirkpatrick model of evaluation. To take behaviour survey and collate data and prepare data interpretation.
- The concept of job rotation is applied at Vedanta. After a certain level of experience, employees are allowed to shift their departments.
- To understand the production process at Pig iron plant, Met Coke Division, and BF3 plant.
- Safety majors to be taken in the factory,
- 5s theory – I studied the importance of 5s audit and how auditors conduct audit in departments.
- Managing the people of your company can be more effective only when the HR team knows about its people, their needs, work challenges, etc. This internship not only helped me experience and be a part of the functions of the HR department, but also gave me an opportunity to interact with and learn the work done by other departments at the company.

RECOMMENDATION/ SUGGESTION

During my project I got opportunity to interact with employees, some of the points highlighted by the employees are.

- As it is online the problem of internet connectivity else everything was nicely arranged and practically presented.
 - Due to virtual connect there was connectivity issue faced a few times during training.
 - Employees prefer class room training over virtual platform. Because in class room there is perfect exposure and communication with all colleagues and the instructor. In virtual platform, most of the people are silent because of their network connectivity. There is less enthusiasm of people in terms of participation through virtual platform.
 - Login issues and signal interruption
 - Face to face communication was missing
-
1. It suggests to start offline training programmes for employees for more effectiveness.
 2. The training duration should be increased especially inexperienced, the fresher it helps to learn in detail, update their knowledge and enhance working ability.
 3. It also suggests to have outside experts for training the employees which will attract and make employees serious about training.

CONCLUSION

From the study it can concluded that Sesa Vedanta – VAB Amona, Goa. is providing training to employees effectively but still it can make it more effective by stating offline training programme. The employees satisfied the way programme is conducted by the company. The training programme helps to increasing the knowledge, skill, and ability. For the training session candidates should select themselves as per need analysis it will provide opportunity every employee who really in need of training. This will benefit both organization and employees.

- **REFERENCE**

- www.vedantalimited.com
- Vedanta Sesa Goa Staff
- Annual report 2020 -2021
- Kirkpatrick's_Evaluation_Model.pdfL. Nyamarebvu, "An investigation of Business Improvements in the mining industry of South Africa to establish if small to medium companies
- American Society for Training and Development. (1997). National HRD executive survey, measurement and evaluation, 1997 fourth quarter survey report. Retrieved April 9, 2002, from http://www.astd.org/virtual_community/research/nhrd/nhrd_executive_survey_97me.htm Baldwin, T., & Ford, J. K. (1988).
- Transfer of training: A review and directions for future research. *Personnel Psychology*, 41, 63-105.
- Kirkpatrick, D. L., Techniques for evaluating training programs. *J. Am. Soc. Train. Dev.*, 1959, 13, 11-12. Kirkpatrick, D.L. (1998). *Evaluating Training Programs: The Four Levels*. San Francisco: Berrett-Koehler.
- obtain better performance after implementing the improvements," University of Pretoria, Pretoria, 2012.
- T. Hattingh and O. Keys, "How applicable is industrial engineering in mining?," International Platinum conference proceedings, pp. 205-210, 2010.

ANNEXURE

TRAINING FEEDBACK

Employee Name: _____

Employee Code: _____

Department: _____

Name of the training program: _____

Dates of training: _____

TRAINING FEEDBACK-Tick mark the most appropriate option:

1. Poor 2. Satisfactory 3. Good 4. Very Good 5. Excellent

Parameters/Score	1.	2.	3.	4.	5.	Remarks /Feedback
1.) The content of the program was suitable to the role						
2.) The concepts and skills learnt will make a difference in the way I work						
3.) The training program was logically sequenced						
4.) The learning process was interesting and enjoyable.						
5.) The Facilitator was competent enough to draw participation from the class						
6) The Facilitator had adequate knowledge about the subject of Training						
7) The Facilitator's communication was effective						

8) The Facilitator was sensitive to participants needs						
9) The Facilitator managed the learning process well						
10) The program could be recommended to peers with similar needs						
11)The concepts and skills learned are easy to use						
12) The training met the expectations set out at the start of the program						
13) Overall the training program was effective						
14)The Virtual environment(room, seating etc...)was conducive to learning						

The strengths (in terms of content, style of delivery, arrangements, objectives, etc..) of the training program are

The weakness (in terms of content, style of delivery, arrangements, objectives, etc...) of the training program are

Kindly provide an action plan for next 6 months, based on the learnings from the training

Trainee Signature: _____

Date:

Pre-test – Post test

Aspect/Impact Training

1. An initial environmental review is sometimes known as a preparatory review. True/False
2. ISO 14001 states that the process used to identify aspects and significant impacts should cover four key areas: (Select three)
a) Identification of legislative and regulatory aspects
b) Identification of significant aspects
c) Examination of all new environmental management practices and procedures
d) Evaluation of feedback from the investigation of previous incidents.
3. There are four main stages in carrying out an initial review. True/False
4. The following documents should be included in the review:
a) Consents to discharge to controlled waters
b) Consents to discharge to sewer
c) Originals of waste management licences and transfer notes
d) Details of breaches and prosecutions
e) Delivery monitoring data
f) Maintenance schedules
5. If the site has its own effluent treatment plant, details of its operations should be obtained from consents and operating procedures. True/False
6. During the site investigation, the operations carried out within the organisation should be studied. True/False
7. The main findings and recommendations should also be communicated to all personnel. True/False
8. _____ of gasses, solvent vapours, fumes, dust, steam and noise should be considered.
a) Emissions
b) Exclusions

Behavioral Safety Questions

1. Behaviour-based safety focuses intervention on observable behaviour. True/False
2. Behaviour-base safety looks for internal factors to understand and improve behaviours. True/False
3. Behaviour-based safety focuses on _____ consequences to motivate behaviour. Positive
4. Safety in the workplace is a combination of three measurable components:
a) Worker
b) Environment
c) Accidents
d) Behaviour
5. Lack of motivation often centres around attitudinal problems. True/False
6. The majority of programs and processes do not address human behaviours. True/False
7. What is first implementation phase of Behaviour-based safety?
a) Educate and train
b) Get certified for BBS implementation with required documentation
c) Assess the safety culture
8. The corporate safety culture should _____ employees to set and achieve their own goals. Empower
9. Behaviour-based safety focuses on at-risk behaviours that can lead to _____. Incidents/injuries/accidents
10. It is important to keep your eyes on _____ while working & eyes on _____ while walking. Job/work & Path

TRAINING REVIEW BY SUPERVISOR

Employee Name: _____ Employee Code: _____

Department: _____

Name of the training program attended: _____

Dates on which the training was conducted: _____ - _____

Marks Obtained (if applicable)

Pre-Test	
Post Test	

TRAINING FEEDBACK-Tick mark the most appropriate option:

1. Poor 2. Satisfactory 3. Good 4. Very Good 5. Excellent

Parameters/Score	1.	2.	3.	4.	5.	Remarks /Feedback
1.) Increase in Knowledge						
2.) Application of Knowledge						
3.) Increase in performance with regard to job resp.						
4.) Sustenance and persistence of knowledge & resp.						
5.) Knowledge Sharing and training others						

Overall comments if any:

Would you recommend this training to your other subordinates/colleagues?

Definitely

☐

Not certain

☐

Probably

☐

Definitely not

☐

Supervisor's Signature: _____

Date: _____

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