



THE STUDY ON IMPACT OF EMPLOYEE TRAINING AND DEVELOPMENT PROGRAMS ON ENHANCING PRODUCTIVITY AT C.R.I PUMPS, COIMBATORE

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Abstract:

This study examines the impact of employee training and development programs on productivity at C.R.I. Pumps, Coimbatore. Adopting a descriptive research design, the study utilizes both quantitative and qualitative approaches to evaluate the effectiveness of training initiatives among 120 employees from various departments. The research focuses on assessing pre- and post-training performance, the relevance of training methods, and employee perceptions of training practices. The findings highlight that structured, frequent, and hands-on training significantly contributes to enhancing employee skills, adaptability, and overall productivity. Employees also emphasized the importance of integrating new technologies, promoting cross-functional learning, and involving staff in training design to improve engagement and learning outcomes. The study reinforces that well-planned training programs aligned with organizational goals are essential for strengthening workforce capabilities and achieving operational excellence.

Key Words: Employee Training, Development Programs, Workforce Performance, Skill Enhancement, Cross functional Training, Organizational Development, Employee Engagement, Training Effectiveness.

Introduction:

Employee training and development are essential for improving skills, enhancing productivity, and enabling organizations to remain competitive in a fast-changing business environment. Effective training programs help employees adapt to new technologies, strengthen job performance, and increase motivation. As companies face growing demands for efficiency and quality, developing a capable and well-trained workforce has become a strategic priority.

C.R.I. Pumps, Coimbatore, places strong emphasis on continuous employee development to maintain its leadership in the pump manufacturing sector. The organization regularly updates its training initiatives to support employee growth and operational excellence. This study focuses on understanding how these training and development programs influence employee productivity. By evaluating employee performance and learning outcomes, the research aims to provide insights that can help improve training effectiveness and support long-term organizational success.

Objectives:

- To analyse the impact of training on employee performance and productivity.
- To assess employee perception and satisfaction with the training programs.
- To examine the alignment between training objectives and organizational goals.

Review of Literature:

- Sathiskumar Vellingiri (2025) highlights that training initiatives significantly improve employee skills, knowledge retention, and productivity at CRI Pumps, Coimbatore. Using statistical tools, the study confirms strong performance gains but notes gaps in interactive learning and content quality, emphasizing the need for strategically designed training programs aligned with organizational goals.
- Dr. R. Jayashree and Dr. K. Sabarinathan (2025) show that training in the IT industry enhances productivity, job satisfaction, and retention, though challenges such as workload and insufficient managerial support affect effectiveness; the study stresses the importance of lifelong learning and well-planned development programs.
- Ms. N. Uma Maheswari and Agreeesha (2024) find that training at Prompt Infotech positively influences skills, productivity, and job satisfaction, with survey results showing that structured training aligned with organizational objectives leads to better employee performance.
- Dr. T. Snekalatha, Ms. Ramya Krishnan, and Ms. Pradhira (2025) reveal that IT training at Sharp Hydro improves technical skills, reduces errors, and enhances communication, concluding that aligning training with organizational goals supports innovation and operational excellence.
- Dr. J. Anand, Dr. M. Ganesan Alias Kanagaraj, and Dr. S. P. S. Arul (2022) report a strong positive link between training and performance in the BPO industry, noting that trained employees show improved skills and communication, reinforcing the importance of training in boosting productivity and overall industry success.

Research Methodology:

Research Design & Approach:

The study employs a descriptive research design, enabling a detailed assessment of training and development practices within the organization. A quantitative approach supported by qualitative insights is used, with primary data collected through structured questionnaires and secondary data gathered from company records, manuals, reports, and relevant literature.

Sample Size & Technique:

The population includes 350 employees at the C.R.I. Pumps, from which a sample of 120 employees representing various departments was selected. Stratified random sampling was used to ensure balanced and accurate representation of the workforce.

Techniques Used:

- Paired T-test analysis
- Descriptive statistics
- Spearman correlation analysis

Data Analysis and Interpretation:

Paired T-Test:

Table showing Paired T-test analysis of pre-and post-training productivity:

Employee Code	Pre-Training Score	Post-Training Score	Improvement (%)
AAW08758	62	80	29
AAW08759	65	83	27.7
AAW08760	70	88	25.7
AAW08761	68	84	23.5
AAW08762	60	78	30
AAW08763	72	90	25
AAW08764	66	82	24.2
AAW08765	63	79	25.4
AAW08766	75	91	21.3
AAW08767	69	86	24.6
AAW08768	64	82	28.1
AAW08769	71	89	25.4
AAW08770	62	80	29
AAW08771	74	90	21.6
AAW08772	70	87	24.3
AAW08773	65	82	26.2
AAW08775	66	84	27.3
AAW08776	63	79	25.4
AAW08778	68	85	25
AAW08779	72	89	23.5
AAW08780	64	81	26.6
AAW08781	70	88	25.7
AAW08782	67	85	26.9
AAW08783	73	90	23.3
AAW08784	65	82	26.2
AAW08785	60	77	28.9
AAW08786	69	86	24.9
AAW08787	71	88	23.9
AAW08788	68	85	25
AAW08789	63	80	27
AAW08790	65	83	27.7
AAW08791	72	89	23.6
AAW08792	70	87	24.3
AAW08793	74	91	23
AAW08794	66	83	25.8
AAW08795	69	86	24.6
AAW08796	62	80	28
AAW08797	64	79	25.4
AAW08798	68	85	25
AAW08799	70	88	25.7
AAW08800	63	80	27
AAW08801	66	84	27.2
AAW08802	75	92	22.7
AAW08803	67	85	24.5
AAW08804	65	82	26.2
AAW08805	70	87	24.3

AAW08806	62	80	28
AAW08807	68	86	26.5

Table showing the Paired Samples Statistics of pre-and post-training productivity:

Variable	Mean	Std. Deviation
Pre-Training Score	67.18	4.009
Post-Training Score	84.36	3.947

The mean performance score increased from 67.18 before training to 84.36 after training, showing a clear improvement in employee performance

Table showing the Paired Samples Test of pre-and post-training productivity:

Statistic	Value
Mean Difference	-17.18
95% Confidence Interval	-17.38 to -16.98
t-value	-175.87
Df	49
Sig. (2-tailed)	0

The mean difference between pre- and post-training scores is -17.18 (post scores are higher). The t-value (-175.867) is very large, and the p-value = 0.000 (< 0.05).

Interpretation:

Employee performance showed a substantial improvement after training, reflected in an average increase of 17.18 points. The large negative t-value indicates a strong and meaningful difference between pre- and post-training scores. The p-value of 0.000 confirms that this difference is statistically significant, demonstrating the real impact of the training. The results clearly show that the training program was highly effective in enhancing employee productivity and performance

Descriptive Statistics:

Table showing the Employee Perception, Engagement, and Satisfaction:

Variables	Mean	Mode
I find the training sessions engaging and interactive.	2.68	1
I am satisfied with the overall training experience.	2.72	4
The training meets my expectations and learning goals.	2.69	4
I am motivated to attend training sessions.	2.72	4
I feel more valued as an employee when offered training.	2.69	1
I am encouraged to provide feedback about training.	2.52	1
My feedback is taken seriously and acted upon.	2.65	4
I actively participate in training sessions.	2.50	1
I feel confident applying the training content in my job.	2.73	4
I would recommend the training programs to my colleagues.	2.59	1

Interpretation:

The results indicate that employees are moderately satisfied with the overall training experience, with most responses hovering around the neutral point. While the training sessions are perceived as engaging and somewhat motivating, they do not appear to have a strong or consistent impact on all participants. Satisfaction levels vary noticeably among employees, suggesting mixed perceptions regarding the effectiveness and relevance of the training program. Additionally, the findings highlight the need for improvements in several areas, particularly encouraging feedback, promoting active participation, and helping employees feel more valued during the training process, all of which are essential for enhancing overall training satisfaction.

Spearman Correlation Analysis:

Hypothesis:

Null Hypothesis (H₀): There is no significant relationship between the training objectives and the strategic goals.

Alternative Hypothesis (H₁): There is a significant relationship between the training objectives and the strategic goals.

Variables	Training programs aligned with strategic objectives	Training helps achieve productivity goals	Content reflects business challenges	Performance improvements contribute to growth	Training linked to mission & vision
Training programs aligned with strategic objectives	1	.278	.296	.265	.359
Training helps achieve productivity goals	.278	1	.136	.514	.340
Content reflects business challenges	.296	.136	1	.264	.603
Performance improvements contribute to growth	.265	.514	.264	1	.383
Training linked to mission & vision	.359	.340	.603	.383	1
Sig. (2-tailed) - Training programs aligned with strategic objectives	-	0.002	0.001	0.003	0.000
Sig. (2-tailed) - Training helps achieve productivity goals	0.002	-	0.139	0.000	0.000

Sig. (2-tailed) - Content reflects business challenges	0.001	0.139	-	0.004	0.000
Sig. (2-tailed) - Performance improvements contribute to growth	0.003	0.000	0.004	-	0.000

Interpretation:

The analysis shows that the strongest relationship (.603) occurs between training that reflects current business challenges and the alignment of training initiatives with the company’s mission and vision, indicating a close and meaningful connection between relevant training content and strategic direction. Overall, these results suggest that C.R.I. Pumps’ training programs are effectively aligned with its broader strategic goals, contributing positively to organizational growth and enhanced productivity.

Findings:

- **Effect on Employee Productivity (Paired T-Test):** The training program led to a significant improvement in employee performance, with mean productivity scores increasing from 67.18 (pre-training) to 84.36 (post-training). The mean difference of 17.18 points is statistically significant ($t = -175.87, p = 0.000$), indicating that the training effectively enhanced employees’ task efficiency, problem-solving, and overall work performance.
- **Employee Perception, Engagement & Satisfaction (Descriptive Statistics):** Employees reported moderate satisfaction and engagement with the training sessions. While they found the training somewhat engaging and motivating, responses clustered around neutral levels, showing mixed perceptions. Areas such as feedback encouragement, active participation, and feeling valued were identified as needing improvement, highlighting opportunities to increase engagement and the perceived value of training.
- **Alignment with Organizational Goals (Spearman Correlation):** The correlation analysis revealed positive relationships between training objectives and strategic alignment. The strongest correlation (.603) exists between training reflecting business challenges and alignment with the company’s mission and vision, demonstrating that relevant, practical training content supports organizational goals. Other correlations also indicate that training programs effectively contribute to productivity, growth, and strategic objectives.

Suggestions:

- **Enhance Engagement and Participation:** Incorporate more interactive elements such as group activities, hands-on exercises, and real-world problem-solving scenarios to make training sessions more engaging and encourage active participation.
- **Strengthen Feedback Mechanisms:** Create structured channels for employees to provide feedback on training sessions, ensure their suggestions are acknowledged, and act on them to make employees feel valued and involved in the learning process.
- **Align Training with Individual and Organizational Goals:** Regularly review and update training content to reflect current business challenges, emerging technologies, and organizational priorities, ensuring that employees can directly apply new skills to improve productivity and support strategic objectives.

Conclusion:

The study on “Impacts of Employee Training and Development Programs on Enhancing Productivity at C.R.I. Pumps, Coimbatore” demonstrates that well-structured training programs significantly improve employee performance and organizational productivity. Data from 120 employees showed that training led to statistically significant increases in performance scores, enhancing practical skills, confidence, and task efficiency. Employees highlighted the value of hands-on, technology-driven, and cross-functional training, as well as the importance of involvement in designing learning initiatives. Aligning training with organizational goals and using practical, case-based approaches ensures relevance and strategic impact. However, the findings confirm that engaging and targeted training programs are essential for maintaining a skilled, efficient, and adaptable workforce.

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