HR Management Training Effectiveness & Performance Report

Evaluating Training Effectiveness, Performance Growth, and Cost Efficiency

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EXECUTIVE SUMMARY

The company's investment in training demonstrates a strategic use of its budget, with 98.7% of the allocated budget being utilized effectively and only 1.3% remaining unspent, reflecting prudent budget management. While most training programs operated within their budget limit, only Database Administration made moderate performance improvement relative to its expense.

Performance outcomes reveal that training programs enhanced employee capabilities significantly, with notable improvements in Communication Skills, Customer Service, Project Management, and Leadership Development. However, participation declined 14% in 2023, indicating a possible drop in employee engagement. Certified employees generally outperformed non-certified employees, validating the positive influence of certifications, though performance gap varied across training types.

OVERVIEW

This report outlines **AdventureTech's** human resources management training initiatives conducted from May 2022 to August 2023. Provided HR training data includes employee id, training date, number of training days, training costs, budgets, training types, training outcome, training programs, trainer info, feedback scores, pre-test scores, post-test scores, and certification status.

Business Questions

- Are training programs improving employee performance?
- Are we spending wisely, or is the budget wasted?
- Identify which training programs delivered the best ROI?
- Which trainer delivered the most effective training?
- Where can improvements be made?

OBJECTIVES & APPROACH

The goal of this project is to help HR leadership assess whether the training programs are improving employee performance, ensure investments are utilized efficiently, identify effective training initiatives, and find opportunities to maximize cost efficiency.

To deliver actionable insights that support HR decision-making, this analysis is structured into three focused parts-

Training Overview Dashboard – Highlights overall employee participation, training completion status, performance improvement, and total expenditure, providing a quick view of training engagement.
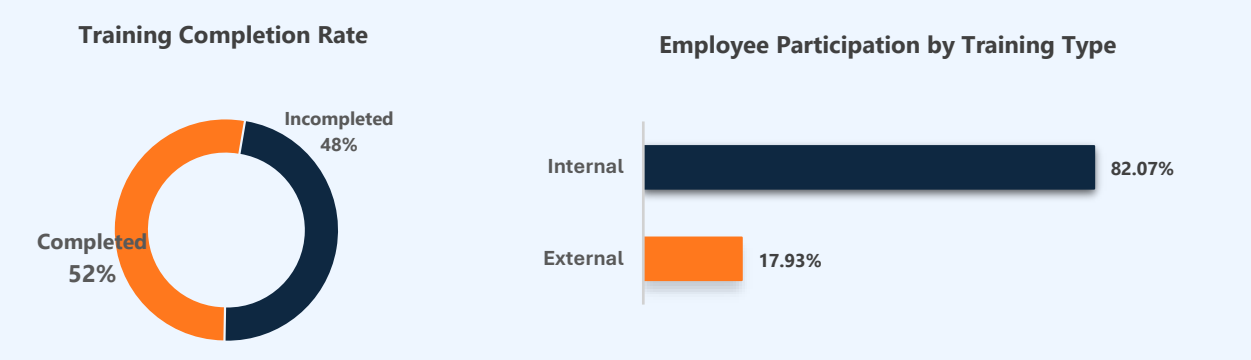
Performance Evaluation Dashboard – Helps to evaluate the effectiveness of training programs by comparing pre-test and post-test scores, employees' performance growth, trainer performance, analyzing feedback scores, and reviewing certification results.

Training Investment & Cost Efficiency Dashboard – Analyzes budget allocation, cost trends, per-employee spending, program-specific training costs, and compares them with measurable performance gains. This offers clarity on the ultimate Return On Investment (ROI), empowering leadership to assess the value delivered by training investments and ensuring that cost-specific decisions are strategic and effective.

KEY FINDINGS & RECOMMENDATIONS

Workforce Training Insights/Training Overview

From May 10, 2022, to August 3, 2023, the company conducted seven training programs involving approximately 145 employees, with the highest participation in May. Most employees received training in Project Management. Employees showed higher participation in Internal training (over 80%) compared to external training programs. Total spending across this period was approximately $95k, and the cost decreased by 30.76% in 2023, indicating a reduction in training investments.

Training Completion Rate

Incompleted
48%

Completed
52%

Employee Participation by Training Type

Internal — 82.07%

External — 17.93%

Regarding the training completion rate, overall 52% employee finished their training, and the completion rate decreased 12% in 2023 compared to 2022, which was 58%. When it comes to employees' engagement in training, this indicates a possible decline in employee interest in training.

Employee Training Outcome Breakdown

Completed 30%
Failed 23%
Ongoing 25%
Passed 22%
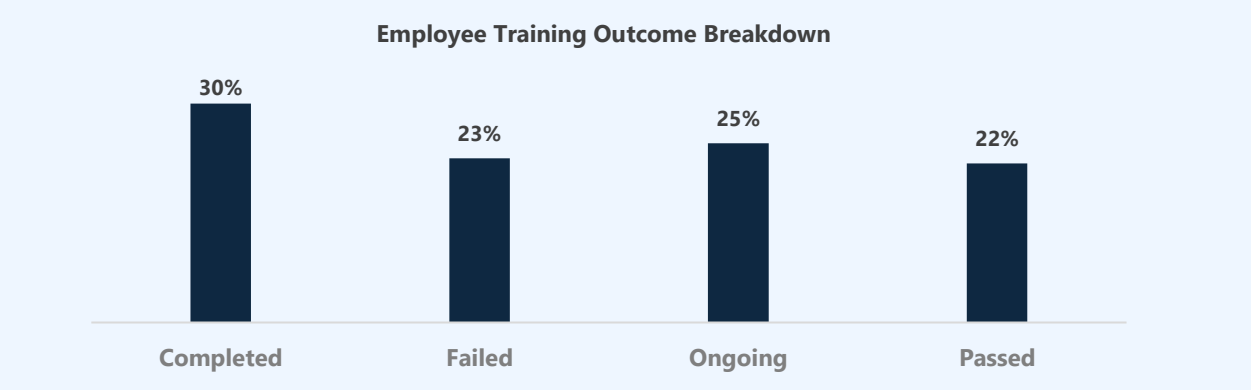
Looking at training outcome status, 30% of participants completed the training, 22% passed, 25% remained ongoing, and 23% failed. Despite these challenges, their performance improved over 36%.

Year-over-Year Insights

- **2022:** 34% completed training, 23% failed, and passed 25%.
- **2023:** Completion rate dropped slightly to 26%, possibly due to 32% of employees being in ongoing training, and failures improved by 1pp, while pass rate stood at 19%.
- Training participation peaked from **October to December in 2022 and January 2023.**

Performance Analysis

Performance analysis highlighted the comparison between pre-test and post-test scores of employees in each training program, emphasizing performance improvements, the effects of certification, and identifying the top-performing training programs.
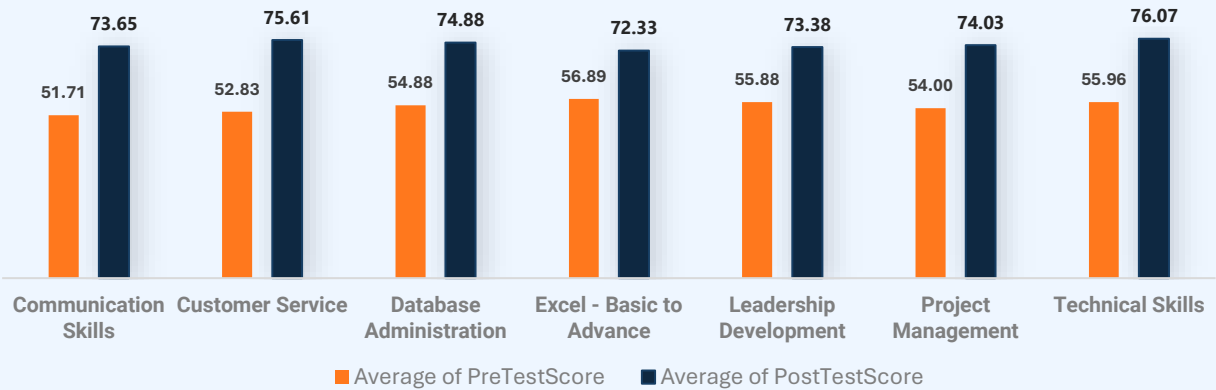
Pre-Test Score vs. Post-Test Score Across Programs

Across all training programs, employees showed measurable improvements. Their pre-test scores ranged (51-57), on average. However, after training, their scores improved to (72-76).
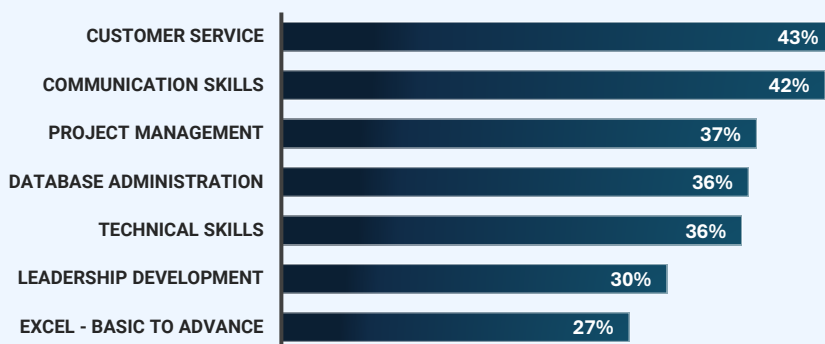
Strongest improvements observed in:

- Customer Service (+23pp)
- Communication Skills (+21pp)
- Technical Skills (+20pp)

Even in Project Management and Database Administration, employees showed significant improvement.
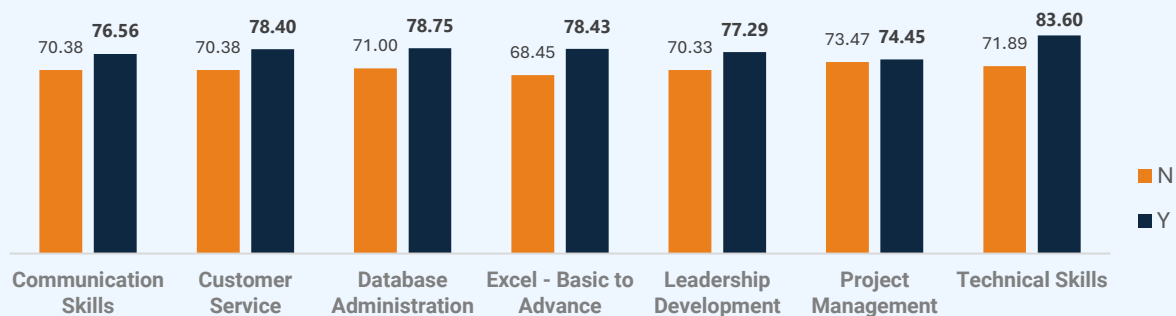
Performance Improvement

From this outcome, we can see that employees showed the highest improvement rates in Customer Service and Communication Skills. As indicated in the training overview, employees are more engaged in Project Management. Here, their performance improved by 37%, which shows strong progress and the program's relevance. Database Administration and Technical Skills both achieved 36% improvement, highlighting their importance in strengthening employees' core technical skills.

Category	Improvement
CUSTOMER SERVICE	43%
COMMUNICATION SKILLS	42%
PROJECT MANAGEMENT	37%
DATABASE ADMINISTRATION	36%
TECHNICAL SKILLS	36%
LEADERSHIP DEVELOPMENT	30%
EXCEL - BASIC TO ADVANCE	27%

However, in **Excel – Basic To Advanced**, participants showed the lowest improvement at 27%. While employees provided an average feedback score of 4.3 for this training, similar to other programs such as Technical Skills and Project Management, this disparity suggests a need to review the training duration and the effectiveness of trainers.

Post-Test Score Comparison Between Certified vs. Non-Certified

In most training programs, certified employees outperformed non-certified employees by a notable margin, indicating that certification may serve as a motivational factor or an indicator of deeper engagement in training. But if we look at Project Management training, certified employees achieved an average post-test score of 74.45, while non-certified employees achieved 73.47 on average. However, the overall data suggests that certification alone is not the sole driver of performance; factors such as training structure, employee motivation, and practical application play equally important roles.

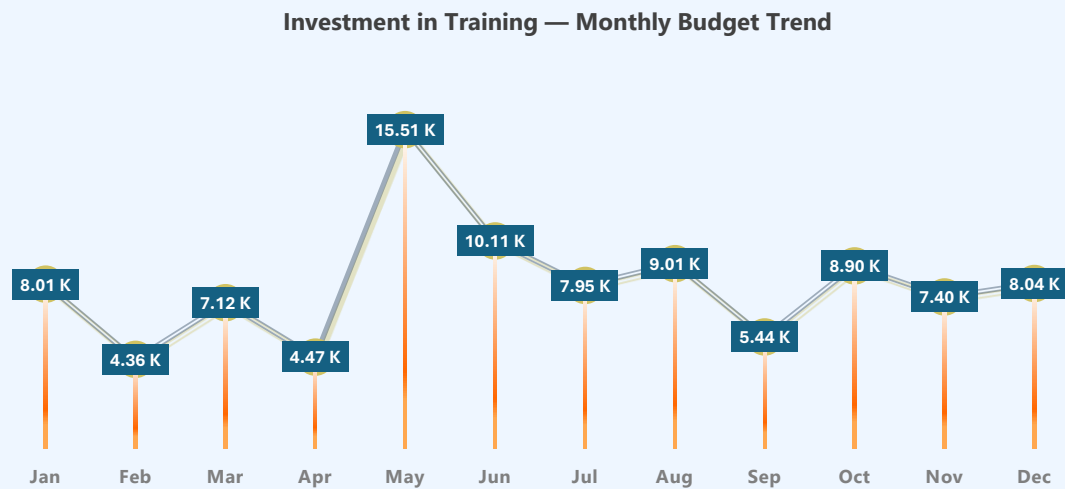| Training	N	Y
Communication Skills	70.38	76.56
Customer Service	70.38	78.40
Database Administration	71.00	78.75
Excel - Basic to Advance	68.45	78.43
Leadership Development	70.33	77.29
Project Management	73.47	74.45
Technical Skills	71.89	83.60

Cost Analysis

Analyzing the monthly spending pattern helps us understand where we spent heavily and how it aligns with the training days provided. Notably, there was a spike in May, where the training cost reached $15.7K — this peak corresponds to the longest training period of 63 days. This increase was largely driven by the **Database Administration** program, which was particularly expensive and running for 11 days in May, costing $7.5K. Alongside, the **Technical Skills** training conducted for 25 days that month at $4.3K.

Training Duration and Training Cost Trend by Month
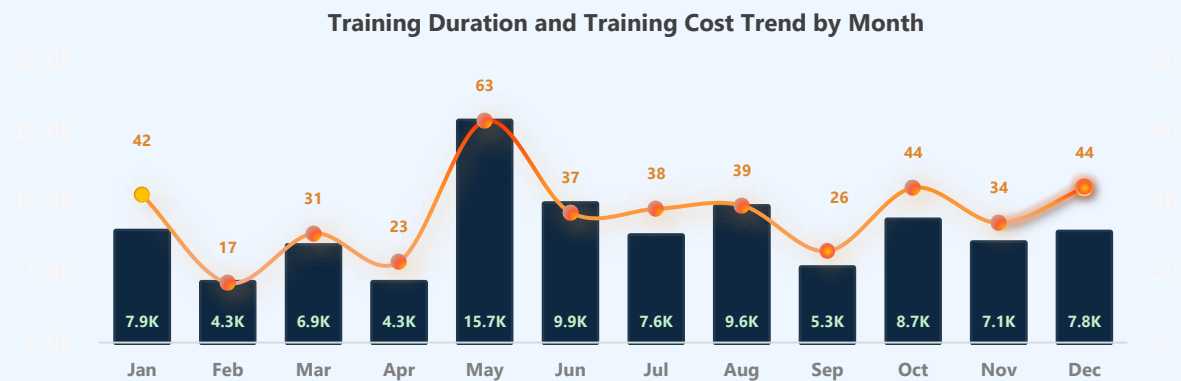
Despite this one-off increase, overall expenses remained well-managed across other months, reflecting improved cost control.

Investment in Training — Monthly Budget Trend

The total training budget during the analyzed period was approximately $96k, of which 98.7% was utilized. When analyzing training-level cost, Database Administration stood out as the only instance where actual cost (18.6k) slightly exceeded its allocated budget ($17.3k).

Examining the investment pattern shows that about 16k was allocated in May. However, the budget remained within the 4k-10k range in other months. The spending trend closely tracked the budget, indicating strong financial control and strategic resource planning in HR operations.

From an overall perspective, internal training programs accounted for roughly 65k, while external programs, mainly **Database Administration and Excel- Basic To Advanced** — cost almost 30k. For future optimization, management could focus on high-cost external programs by renegotiating with vendors or reassessing training durations, considering performance outcomes to maximize ROI.

Which Training Programs Delivered the Best ROI, and Which Trainers Delivered the Most Effective Training?
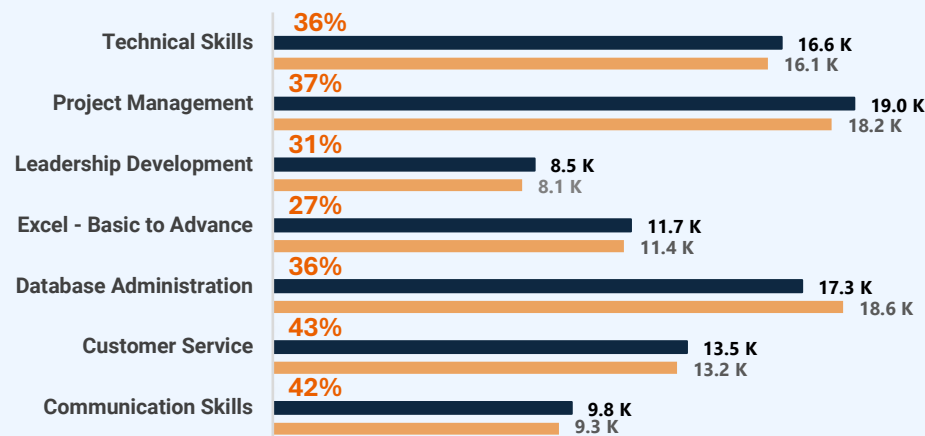
To answer this appropriately, I have performed Correlation and ROI-based performance analysis by comparing performance growth, training cost, training duration, and budget utilization across all training programs, including the Efficiency Ratio to highlight programs that achieved the best balance between impact and budget control.

🔼 Training Program Name	# Total Training Cost	# ROI	# Budget_Used%	# Efficiency_Ratio
Communication Skills	9330	0.045	95.6727	0.0471
Customer Service	13185	0.0326	97.6161	0.0334
Database Administration	18600	0.0194	107.7636	0.018
Excel - Basic to Advance	11446	0.0236	97.9714	0.0241
Leadership Development	8134	0.0381	95.2794	0.04
Project Management	18229	0.0203	96.1141	0.0211
Technical Skills	16144	0.0223	97.294	0.0229

From the above figure, it is evident that **Communication Skills, Leadership Development,** and **Customer Service** training programs delivered the best ROI while maintaining a balanced budget discipline.

- **Communication skills** delivered the highest return— yielding approximately 4.5% improvement for every $1000 investment with nearly 96% budget utilization, best cost-to-performance return.
- **Leadership Development** showed similar efficiency of ROI 0.004 and 95% budget used, demonstrating strong improvement per $1000 spent.
- **Customer Service** performed well consistently, yielding 0.0033 ROI, staying around 97.6% of its allocated budget.

In contrast, only Database Administration overspent its allocated budget while achieving a comparable performance improvement (36%). This led to the lowest efficiency ratio (0.0018), suggesting that performance did not improve proportionally to the amount spent on database management training. Similarly, Technical Skills and Project Management training showed moderate ROI, indicating acceptable performance but low cost-effectiveness compared to the top Programs.

From the trainer's performance perspective, Mark Paul and John Dawson received average feedback scores of 4.5, aligning with the programs that demonstrated the strongest ROI outcomes that reinforcing the link between trainer quality and performance impact.

Overall, the investment in internal training programs proved highly effective, particularly in areas focused on Communication and Leadership skills. Continuous tracking of ROI and efficiency ratios can help HR leadership prioritize high-value programs and trainers for the future training cycle.

Are We Spending Wisely, or is the Budget being Wasted?

The overall analysis shows that the company utilized 98.7% of its allocated training budget, reflecting balanced financial discipline and effective budget management. Only a small portion of the funds, 1.3%, remained unused, which indicates neither overspending nor waste, but rather efficient fund utilization.

Most training programs have been well-managed within budget. Only the Database Administration program is 7.76% over its allocated budget, likely due to high vendor costs and being managed externally. In contrast, internal programs were more cost-effective, collectively totaling around 65K compared to 30K for external programs.

Therefore, it can be concluded that the company's training expenses were strategically managed and effectively utilized. The budget was not wasted — it was focused on initiatives that enhanced employee skills and performance. With ongoing monitoring and performance-based budgeting, the company can ensure that future spending maximizes ROI and supports long-term workforce growth.

Are Training Programs Improving Employee Performance?

The overall performance analysis indicates that the training programs have had a positive and measurable impact on employee performance across most areas. On average, post-training assessment scores increased significantly across all programs, confirming that the learning initiatives are driving skills enhancement and knowledge retention.

Among the evaluated programs, Communication Skills, Leadership Development, and Customer Service training showed the most effective performance improvements, with post-test scores consistently rising compared to pre-training results. These programs delivered strong ROI while maintaining cost efficiency, increasing their strategic value to the company's learning objectives. But in Database Administration, though participants benefited from the training, the improvement was not fully proportional to the cost incurred. Future training cycles in such high-cost programs could focus on reviewing trainer effectiveness, training structure, optimizing training duration, or refining content delivery to ensure better returns on investment.

However, one area of concern is employee participation in training. We found that participation fell by 14.1% in 2023, indicating a potential decline in motivation or perceived value of training. Conducting an Employee Training Satisfaction Survey could help identify key factors influencing training engagements — delivery quality, content relevance, or scheduling — that enable HR management to restructure future training programs for higher participation and satisfaction.

RECOMMENDATIONS AND ACTION PLAN

To strengthen the effectiveness of training programs, cost optimization, and ensure that workforce development contributes directly to the organizational growth, the following recommendations are made-

- **Strategic Budget Planning and Monitoring -** Establishing a training budget framework that aligns cost with measurable performance outcomes. Regular monitoring and variance analysis will help minimize overspending and improve cost predictability.

- **Focus on ROI-Driven Evaluation Metrics –** Linking learning outcomes to productivity by tracking post-training performance and analyzing ROI for all programs may help to identify high-impact areas and eliminate low-value activities.

- **Optimization of High-Cost Trainings** – For high-cost training programs such as Database Administration — focus on delivery method, training curriculum, vendor selection, and reviewing the training period can help to ensure performance improvement is proportional to cost.
- **Enrich Employee Engagement** – We observed a 14.1% decline in participation in 2023. Conducting employee feedback and satisfaction surveys will improve the relevance of training and flexibility of scheduling.

- **Personalized Learning Paths** – Develop role-based learning tracks that align training with individual performance goals and departmental needs, turning workforce learning into a direct enabler of business growth.