

Impact of Online and Offline Training Programs on the Job Performance of Non-Teaching Staff in Autonomous Engineering Colleges

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Abstract: *Training and development have become essential components of human resource management in higher education institutions, particularly in autonomous engineering colleges where non-teaching staff play a crucial role in administrative management, laboratory operations, student services, technical support, and institutional development. The rapid advancement of digital technologies has introduced online training programs as an alternative and complementary approach to conventional offline training. This research paper examines the impact of online and offline training programs on the job performance of non-teaching staff in autonomous engineering colleges.*

Keywords: Online Training, Offline Training, Employee Performance, Non-Teaching Staff, Autonomous Engineering Colleges, Human Resource Development, E-Learning.

I. INTRODUCTION

Higher education institutions are continuously adapting to technological advancement, administrative reforms, and changing educational requirements. Autonomous engineering colleges require efficient non-teaching staff to manage academic administration, examination systems, laboratory facilities, student records, finance, and technical services. The performance of these employees directly influences institutional quality and operational effectiveness. Training and development programs are important mechanisms for improving employee competence and productivity. Traditional offline training programs provide face-to-face interaction, direct supervision, practical demonstrations, and immediate feedback. However, the emergence of digital learning platforms has transformed employee training through online programs that provide flexibility, cost-effectiveness, and accessibility. The integration of online training became particularly significant after technological expansion and the COVID-19 pandemic, when organizations adopted virtual learning environments for employee skill development. Research indicates that well-designed online training programs can positively influence employee satisfaction, knowledge acquisition, and job performance.

II. CONCEPTUAL FRAMEWORK OF THE STUDY

The present study considers training method as an independent variable and job performance as a dependent variable.

Independent Variable:

Training Programs

1. Online Training
2. Offline Training

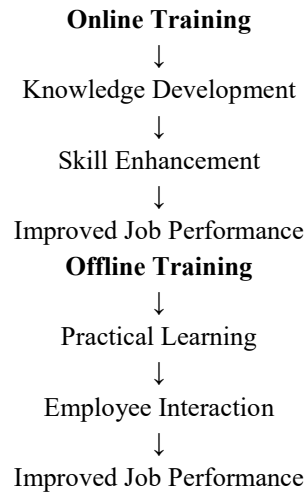
Dependent Variable:

Job Performance

1. Work efficiency

2. Technical competency
3. Productivity
4. Problem-solving ability
5. Job satisfaction
6. Organizational commitment

Figure 1: Conceptual Model



III. REVIEW OF LITERATURE

Training effectiveness has been extensively studied in organizational settings. Chen (2010) examined employee e-learning system usage and found that technology-supported learning contributes positively to job outcomes when employees actively engage with digital learning platforms.

A study by Niazi (2011) highlighted that employee training programs improve knowledge, skills, and workplace performance. The research emphasized that systematic training evaluation is necessary for measuring training effectiveness.

He et al. (2016) suggested that online learning environments improve employee flexibility by allowing individuals to access learning resources according to their convenience.

Wilson et al. (2023) investigated online training and employee job performance and reported that structured online training programs positively influence employee satisfaction and workplace outcomes.

Recent research has also indicated that e-training effectiveness depends on organizational support, trainer capability, technological infrastructure, and learning content quality.

Table 1: Previous Studies on Training Programs and Employee Performance (2010–2023)

Author & Year	Research Area	Methodology	Major Findings
Chen (2010)	Employee e-learning system usage	Survey-based study	E-learning improves job outcomes through knowledge transfer
Niazi (2011)	Training impact on staff performance	Questionnaire and statistical analysis	Training improves employee competency and performance
Aguinis & Kraiger (2011)	Training effectiveness	Review study	Training improves individual and organizational outcomes
Salas et al. (2012)	Workplace training	Literature review	Effective training enhances employee productivity
Noe (2017)	Employee development	HRM analysis	Continuous learning improves

			workplace effectiveness
Ren et al. (2018)	Digital learning adoption	Empirical analysis	Technology-based learning improves accessibility
Wilson et al. (2023)	Online training and job performance	Survey method	Online training positively affects employee performance
Kurrohman et al. (2023)	Online and in-house training	Quantitative study	Combined training approaches improve employee capability

IV. ONLINE TRAINING PROGRAMS AND EMPLOYEE PERFORMANCE

Online training refers to technology-supported learning delivered through digital platforms such as Learning Management Systems, video conferencing applications, recorded lectures, and online assessment tools.

Advantages of Online Training

1. Flexibility and Accessibility

Employees can participate in training programs without geographical restrictions. This is particularly beneficial for engineering colleges where staff members have different work schedules.

2. Cost Effectiveness

Online training reduces expenses related to travel, accommodation, training infrastructure, and printed materials.

3. Continuous Learning Opportunity

Digital platforms allow employees to repeatedly access training materials and update their skills.

4. Technology Adaptation

Online programs improve digital literacy among non-teaching employees, which is essential for modern institutional management.

V. OFFLINE TRAINING PROGRAMS AND EMPLOYEE PERFORMANCE

Offline training involves face-to-face interaction between trainers and employees through workshops, seminars, demonstrations, and classroom-based sessions.

Benefits of Offline Training

1. Practical Skill Development

Laboratory assistants, technical staff, and administrative employees benefit from direct demonstrations and hands-on activities.

5. Better Communication

Face-to-face training encourages discussion, teamwork, and immediate clarification of doubts.

3. Stronger Employee Engagement

Physical interaction improves motivation, confidence, and professional relationships.

Table 2: Comparison Between Online and Offline Training

Criteria	Online Training	Offline Training
Learning Mode	Digital platforms	Classroom/workshops

Flexibility	High	Limited
Cost	Low	High
Interaction	Moderate	High
Practical Exposure	Limited	Excellent
Accessibility	Anywhere learning	Location dependent
Technology Skills	Improved	Moderate
Feedback	Delayed/online	Immediate

VI. RESEARCH METHODOLOGY

1. Research Design

The study adopts a **descriptive and analytical research design**.

2. Population

The population consists of non-teaching staff working in autonomous engineering colleges.

3. Sample Size

A proposed sample of 200 non-teaching employees may be selected from different autonomous engineering colleges.

4. Sampling Technique:

Stratified random sampling will be used.

Sample categories:

Category	Number
Administrative Staff	80
Technical/Laboratory Staff	60
Examination Department Staff	30
Support Staff	30
Total	200

VII. RESEARCH OBJECTIVES

1. To examine the effectiveness of online training programs among non-teaching staff.
2. To analyze the impact of offline training on employee job performance.
3. To compare online and offline training effectiveness.
4. To identify challenges associated with both training methods.
5. To suggest strategies for improving employee training systems.

VIII. HYPOTHESES OF THE STUDY

H₀₁: There is no significant relationship between online training and job performance of non-teaching staff.

H₀₂: There is a significant relationship between online training and job performance of non-teaching staff.

H₀₃: Offline training does not significantly influence employee performance.

H₀₄: Offline training significantly improves employee performance.

H₀₅: There is no significant difference between online and offline training effectiveness.

IX. DATA ANALYSIS TECHNIQUES

The collected data can be analyzed using:

1. Percentage Analysis
2. Mean and Standard Deviation
3. t-test
4. ANOVA
5. Correlation Analysis
6. Regression Analysis

Table 3: Expected Relationship Between Training and Performance

Training Dimension	Expected Impact
Knowledge Improvement	Positive
Technical Skills	Positive
Work Efficiency	Positive
Motivation	Positive
Job Satisfaction	Positive
Organizational Commitment	Positive

X. FINDINGS FROM LITERATURE

Based on previous studies, the following trends are identified:

1. Training programs positively influence employee performance.
2. Online training improves accessibility and digital competency.
3. Offline training provides better practical experience.
4. A blended training approach produces better outcomes compared to a single method.
5. Institutional support and technological infrastructure influence training success.

Research evidence suggests that training programs generally have a positive relationship with organizational performance and employee outcomes.

XI. CHALLENGES IN ONLINE AND OFFLINE TRAINING

I. Online Training Challenges

1. Poor internet connectivity
2. Lack of digital skills
3. Reduced personal interaction
4. Technology barriers

II. Offline Training Challenges

1. Higher cost
2. Time constraints
3. Requirement of physical infrastructure
4. Limited flexibility

XII. CONCLUSION

Training programs play a significant role in improving the job performance of non-teaching staff in autonomous engineering colleges. Online training provides flexibility, accessibility, and technological advancement, whereas offline training ensures practical learning, interaction, and direct guidance. The comparative analysis indicates that both approaches contribute positively to employee development. However, a blended training model integrating online

convenience with offline practical exposure can provide maximum benefits. Effective training strategies can enhance employee efficiency, institutional productivity, and overall quality of higher education management.

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