ARTIFICIAL INTELLIGENCE IMPACT ON TRAINING AND DEVELOPMENT OF EMPLOYEES

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Abstract
The rapid advancement of Artificial Intelligence (AI) has significantly influenced modern Human Resource Management practices, particularly in the area of training and development. This study investigates the impact of AI-enabled training systems on employee learning, skill enhancement, and overall development. Primary data were collected from employees across different sectors using a structured questionnaire. The data were analyzed using percentage and mean score analysis, supported by graphical representation. The findings reveal that AI-based training methods enhance learning effectiveness, personalization, engagement, and time efficiency. The study concludes that AI plays a vital role in improving employee training outcomes and recommends increased adoption of AI-driven learning platforms in organizations.

Keywords: Artificial Intelligence, Employee Training, Human Resource Management, Learning and Development, Digital HR.

Introduction
Artificial Intelligence has emerged as a transformative technology influencing various organizational functions. In Human Resource Management, AI has introduced innovative ways to manage employee learning and development. Traditional training methods often follow a uniform approach, which may not address individual learning needs. AI-powered training systems, such as intelligent Learning Management Systems (LMS), virtual trainers, chat bots, and data-driven analytics, enable personalized learning experiences and continuous performance monitoring. As organizations face rapid technological changes, AI-based training has become essential for developing a skilled and adaptable workforce.

Statement of the Problem
Despite increasing investment in employee training, many organizations continue to face challenges related to low engagement, limited personalization, and ineffective skill transfer. Conventional training programs often lack flexibility and real-time feedback mechanisms. There is a need to empirically study whether AI-based training and development systems effectively address these challenges and contribute to improved employee development.

Objectives of the Study
1. To study the level of employee awareness regarding AI-based training systems.
2. To examine the effectiveness of AI in enhancing employee learning outcomes.
3. To analyze employee perceptions toward AI-driven training and development programs.
4. To evaluate the impact of AI on training efficiency and skill development.

Research Methodology
Research Design: The study adopts a descriptive and analytical research design to understand employee perceptions of AI-based training systems.

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Source of Data: Primary data were collected directly from employees using a structured questionnaire.

Sample Size: The study is based on responses from 120 employees working in IT, manufacturing, education, and service sectors.

Sampling Technique: Convenience sampling technique was used for data collection.

Research Instrument: A structured questionnaire consisting of 10 statements measured on a five-point Likert scale was used.

Tools for Data Analysis: Percentage analysis, mean score analysis, and graphical representation were used to analyze the data.

Hypothesis
H_1: Artificial Intelligence-based training has a significant positive impact on employee training and development.
H_0: Artificial Intelligence-based training has no significant impact on employee training and development.

Data Analysis and Interpretation
The collected primary data were analyzed to measure employee responses toward various aspects of AI-based training such as awareness, learning effectiveness, personalization, time efficiency, and skill development. Mean score analysis indicates that employees generally agree that AI enhances the effectiveness of training programs. The graphical representation shows higher mean values for personalization and learning effectiveness, highlighting the strength of AI-driven training systems.

Table

AI Awareness	Learning Effectiveness	Personalization	Time Efficiency	Skill Development
5	3	3	4	3
3	5	3	5	4
5	4	5	4	4
5	5	4	4	4
3	5	3	5	3
3	3	5	4	4
5	5	5	4	4
4	3	5	5	3
5	5	4	4	5
5	4	5	5	3
5	5	5	4	4
5	3	5	5	4
3	3	5	5	3
5	4	3	4	5
4	5	3	4	4
3	5	5	4	4
4	4	4	3	4
4	5	3	3	3

4	5	5	3	4
4	3	3	5	5
3	5	3	4	4
3	5	4	5	4
4	4	5	3	5
4	4	5	4	4
3	3	4	5	3
3	5	4	4	3
3	5	5	5	3
5	5	5	4	5
5	3	4	3	4
5	3	3	3	3
4	4	3	4	5
5	3	4	5	4
4	5	3	3	5
4	5	4	3	3
5	3	3	3	3
4	5	3	4	3
5	5	5	4	5
5	3	5	5	5
3	3	3	5	3
5	5	3	5	5
3	5	5	4	3
5	5	5	4	3
5	4	5	5	4
3	4	4	5	5
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5	3	4	3	4
5	5	4	4	3
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4	3	5	5	4

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3	4	5	3	4
3	4	3	5	3
3	4	3	4	3
5	5	4	4	4
3	3	3	4	3
3	3	4	3	4
5	3	3	3	3
5	5	4	3	5
5	4	5	3	5
3	4	3	3	3

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5	3	3	5	3
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3	4	3	3	5
5	5	4	4	3
3	5	3	3	5
4	5	5	5	4
5	5	5	5	5
4	3	3	4	5
3	5	5	5	4
5	4	3	3	5
3	3	3	4	3
4	4	5	3	3
3	4	3	3	5
5	4	5	4	3
5	5	4	3	5
4	5	3	5	3

Source: Primary data collected through questionnaire, 2025.

Graphical Representation
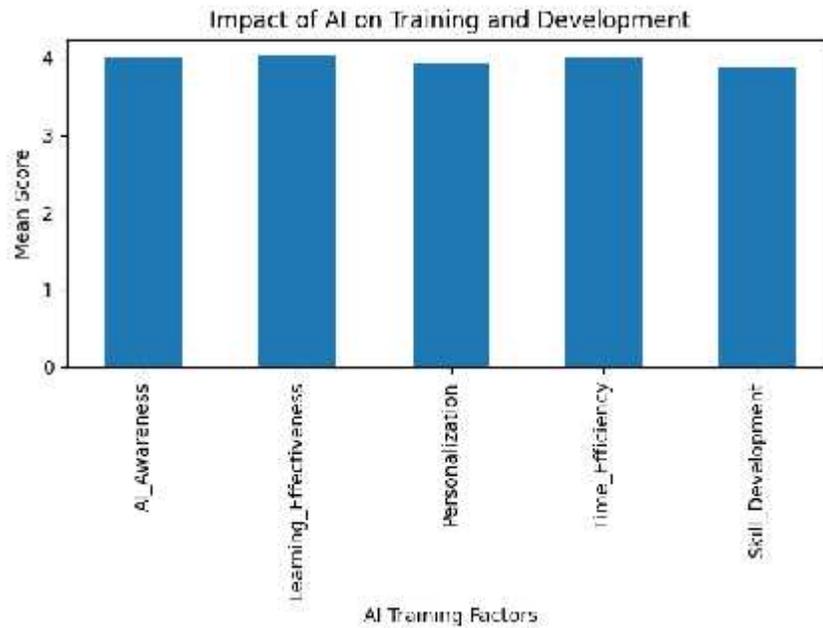
Source: Computed from primary data collected through questionnaire, 2025.

Results and Discussion

The analysis reveals a positive perception of AI-based training among employees. Most respondents agreed that AI-based systems provide customized learning content and real-time feedback, which improves engagement and learning outcomes. Employees also reported that AI-based training saves time and helps them acquire job-relevant skills more effectively. These findings support the alternative hypothesis that AI has a significant impact on employee training and development.

Findings of the Study

1. Employees demonstrate a high level of awareness of AI-based training tools.
2. AI-driven training programs improve learning effectiveness and engagement.
3. Personalized learning paths supported by AI enhance skill development.
4. AI-based training methods are perceived as time-efficient and user-friendly.

Suggestions

1. Organizations should invest in AI-enabled learning management systems.
2. HR professionals should be trained to effectively use AI-based training analytics.
3. Continuous learning programs supported by AI should be encouraged to address skill gaps.
4. Employees should be oriented toward the benefits and usage of AI-based training tools.

Conclusion

The study concludes that Artificial Intelligence has a significant and positive impact on the training and development of employees. AI-based training systems offer personalized, efficient, and engaging learning experiences that enhance employee skills and organizational performance. As digital transformation accelerates, the integration of AI in training and development will become increasingly important for organizational success.

References

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Appendix: Questionnaire

(Five-point Likert Scale: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly Agree*).*

1. I am aware of AI-based training tools used in my organization.
2. AI-based training improves my overall learning effectiveness.
3. AI provides personalized training content based on my learning needs.
4. AI-based training programs save time compared to traditional methods.
5. AI-based training enhances my job-related skills.
6. AI-driven training programs increase my engagement in learning activities.
7. AI-based assessments provide accurate and timely feedback.
8. My organization effectively uses AI for employee training and development.
9. AI-based training platforms are easy to use and accessible.
10. Overall, Artificial Intelligence has a positive impact on my professional development.