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Role of Artificial Intelligence in Training and Development for Employees with Reference to It Companies, Coimbatore Districts

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ABSTRACT

This study looks at how Artificial Intelligence (AI) is used in training and development (T&D) in IT companies in Coimbatore. The goal is to understand how AI-powered learning tools affect skill growth, how quickly people learn and how ready organizations are to adopt new technologies. Coimbatore has become a key area for IT and startups in Tamil Nadu, which makes it a good place to study AI use in workplace learning. The research uses a mix of methods, including surveys of employees and learning and development (L&D) managers from major local IT companies, like big service firms and growing product startups, along with interviews and analysis of company learning platforms. Companies were chosen based on recent industry listings and profiles to cover both well-established and new businesses. The results show that AI tools such as adaptive learning platforms, automated skill gap analysis, personalized learning paths and real-time feedback systems greatly help in making training relevant, increasing completion rates and speeding up the time it takes for workers to gain new skills. Companies also say they can better target re-skilling programs and align learning with business goals. Methodology of Study: The study used a descriptive research design and probability sampling as the method for selecting participants. To get data from participants, the researcher used a basic random sampling lottery method. An interview schedule was used to collect data from 60 people.

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KEYWORDS: *Artificial Intelligence, Training and Development.*

INTRODUCTION

In today's digital world, Artificial Intelligence (AI) has become a big change that is affecting how companies run their operations, especially when it comes to training and developing employees. Old ways of training can work well in some situations, but they often have problems like being too expensive, having the same content for everyone and not fitting well with how individuals learn. AI-powered platforms, on the other hand, offer learning experiences that are tailored to each person, driven by data and can change as needed to match what the learner needs. This helps companies match employee skills with the changing needs of their business.

The IT industry is one of the first to use AI in training and development because it moves quickly, needs people to keep learning new things and has to stay ahead in a global market. In this field, AI is used in many ways, like smart learning systems, chatbots that help with knowledge, virtual environments for practice, tools that predict skill gaps and systems that recommend learning materials. These tools help employees stay engaged, learn faster and encourage a habit of continuous learning. Coimbatore, a district in Tamil Nadu, is a growing center for IT and tech services.

The area has seen a lot of growth in software companies, IT services and startups. With more big and small companies setting up there, there's a bigger need for workers to keep improving their skills. Companies in Coimbatore are looking for AI-based training solutions to help employees get better at programming, data analysis, cyber security, cloud computing, and new technologies like machine learning and block chain. This local focus shows how

AI can be used smartly to improve training in a way that meets the needs of the companies and the people working there.

DEFINITION

Upadhyay, A. K. & Khandelwal, K. (2019)- In *"*Artificial intelligence-based training learning from application"*,* they describe AI-based training systems as smart, intelligent and expert in handling queries. These systems can curate content**,** evaluate/grade learning and provide feedback to trainees, making learning adaptive and contextual.

STATEMENT OF THE PROBLEM

Digital technologies are changing very quickly and more and more companies are using Artificial Intelligence (AI). This has greatly changed how organizations work, especially when it comes to training and developing employees. For IT companies, where new technologies come out all the time, good training and development are very important. They need to keep their workers skilled and ready for new demands like cloud computing, cyber security, AI and data analysis. AI-based learning tools are expected to improve training by offering personalized learning, smarter content, real-time progress tracking and insights into skills that need improvement. But even though there is a lot of talk about AI's potential, not much is known about how it's actually being used in training and development in IT companies, especially in Coimbatore, which is now a big IT area in Tamil Nadu. Many IT firms in Coimbatore are small or medium-sized businesses and some are branches of big international companies. These organizations have different levels of preparedness, resources and plans for using AI in training. Some are trying out AI tools, while others are still using old training methods because of worries about cost, technology setup, data safety, how easy it is for workers to adapt and ethical issues. This means there is a big gap between what AI could do for training and how it's actually being used in the local IT industry.

SCOPE OF THE STUDY:

The current study looks at how Artificial Intelligence (AI) is used in training and development (T&D) in IT companies located in Coimbatore district, Tamil Nadu. It includes a range of companies, from big multinational corporations to smaller firms and new startups. Coimbatore has become a major center for IT in Tamil Nadu, making it a good place to study how AI is being used in training. The research covers different types of IT companies, such as those providing services, developing products and offering IT-enabled services. These companies may use either AI-based or traditional T&D methods. The study includes both large and small organizations to understand how different levels of resources and adoption affect training. The main focus is on various T&D activities like on boarding, improving technical skills, re-skilling, developing soft skills and leadership training. Particular attention is given to AI-based training tools such as adaptive learning systems, chatbots, predictive analytics tools and recommendation engines. The people involved in the study include employees and training managers from different levels, such as entry-level workers, mid-level staff and supervisors, because each group experiences AI-driven learning in different ways. The study reflects the current trends and new practices in AI adoption in T&D as seen in the 2020s. It highlights the importance of AI in shaping how organizations develop their workforce. The research looks at both the positive and negative aspects of using AI in employee development. It also explores how AI affects training effectiveness, how well employees adapt to new learning methods, the results of learning and the overall competitiveness of the company.

REVIEW OF LITERATURE

Bhatt, P. & Muduli, A. (2023). European Journal of Training and Development. Systematic literature review (mapping L&D-related AI research, typologies and research gaps). Not applicable (study-level sampling screened academic and industry literature according to SLR protocol). The authors selected and synthesized extant peer-reviewed articles and practitioner reports (SLR inclusion/exclusion criteria reported in the paper). Synthesizes AI applications in L&D (adaptive learning, recommendation engines, chatbots, automated assessment, predictive analytics); highlights need for more workplace-focused empirical studies, longitudinal impact evaluation and governance/ethical analysis. Provides a comprehensive map of research themes and identifies the methodological gaps this thesis will address (regional, firm-level empirical evidence).

Upadhyay & Khandelwal (2019) Conceptual / applied review discussing rationale, theoretical foundations and practical applications of AI-based training systems. Not applicable (review / conceptual). The paper draws on case examples and secondary sources rather than primary field sampling. Describes core AI capabilities used in training (content curation, adaptive sequencing, automated evaluation, feedback loops) and argues for hybrid designs (AI + human facilitator). Useful for constructing operational definitions and T&D technology categories in this thesis.

Daley, K., Hungerbuehler, I., Cavanagh, K., Claro, H. G., Swinton, P. A., & Kapps, M. (2020). Frontiers in Digital Health. Pilot implementation and evaluation of a chatbot ("Viki" / Vitalk) to assess employee mental health and engagement. Although focused on mental-health screening, the paper is directly relevant as an example of chatbot deployment and engagement measurement in workplaces (transferable to T&D chatbots). Pilot implementation: carried out in a small-to-medium enterprise (SME) with an initial pilot rollout among an organization of **120 employees** (pilot). Separately, the authors analyzed a larger "real-world" dataset of **3,629** Vitalk users who completed the first phase of the program (engagement data). The pilot used convenience/organizational sampling for initial rollout; the larger dataset came from program users (real-world usage data). Chatbots can achieve high engagement and scalable data collection; they produce response rates comparable to traditional approaches and can be leveraged to automate routine interactions. For T&D, this suggests chatbots/virtual assistants can be effective for on boarding, micro learning, on-demand support and learning nudges provided design and privacy safeguards are in place.

Methodology of the Study

Objectives of the Study

- To study the personal profile of the respondents.
- To access the level of **Artificial Intelligence (AI) in training and development of the employees**.
- To discover the association between personal profile and **Artificial Intelligence (AI) in training and development of the employees**.
- To assess the difference between personal profile and **Artificial Intelligence (AI) in training and development of the employees**.
- To study the influence of **Artificial Intelligence (AI) in training and development of the employees**.

Research design: The present study is descriptive in nature. The study attempts to describe the personal profile and **Artificial Intelligence (AI) in training and development of the employees**.

Universe of the study: Researcher selected the respondents of **"IT Companies Coimbatore"** as the universe of the study. The researcher selected 60 respondents as sample.

Sampling: The sampling method adopted for the present study is probability sampling. For the present study the researcher used **simple random sampling** and lottery method to collect data from the respondents. In this manner using simple random sampling 60 respondents from **IT Companies Coimbatore** was selected as the sample for the present study.

Tools for data collection: The Researcher Used Questionnaire as Tool of Data Collection. Social Support Scale developed by K.Sucharita & R. Seethalakshmi (2022), this schedule has 12 statements and 7 point scale reliability Alpha = .8913. Artificial Intelligence (AI) in training and development of the employees**.**

The information was dissected utilizing different factual devices like straightforward rate, autonomous t-test and ANOVA.

Finds of the Study

Factors	MEDIUM	FREQUENCY	PERCENT
Age	25yrs-35yrs	42	70%
Gender	Female	45	75%
Marital Status	Unmarried	46	76.6%
No. of Dependents	1-2	34	56.6%
Locality	Semi urban	36	60%
Socio Economic Background	Upper –middle	42	70%
Educational Qualification	UG	46	76.6%
Occupation	IT Profession	40	66.6%
Monthly Income (in Rs.)	Below –Rs.25000	41	68.3%
Year of experience	5yr-10years	42	70%

Simple Percentage Analysis

- Majority (70%) of the respondents is in the age group between 25-35 years.
- Majority (75%) of the respondents have female.
- Majority (76.6%) of the respondents have unmarried.
- Nearly (56.6%) of the respondents have numbers of dependents of 1-2.
- More than (60%) of the respondents have locality of semi urban.

- Majority (70%) of the respondents have socio economic background of upper middle.
- Majority (76.6%) of the respondents have UG of educational qualification.
- Majority (66.6%) of the respondents have occupation of IT Profession works.
- Majority (68.3%) of the respondents have monthly income of below-Rs.25000.
- Majority (70%) of the respondents have 5yrs -10yrars experience.

DISTRIBUTION OF THE RESPONDENTS BY LEVEL OF ARTIFICIAL INTELLIGENCE (AI) IN TRAINING AND DEVELOPMENT

S. No	Artificial Intelligence (AI) in training and development	Number of Respondents	Percentage %
1	High	19	31.6
2	Moderate	24	40.0
3	Low	17	28.4
TOTAL		**60**	**100**

INTERPRETATION

The above table highlights the artificial intelligence (AI) in training and development level of the respondents. It is understood from the above table that 40 percent of the respondents have moderate level of artificial intelligence (AI) in training and development, 31.6 percent of the respondents have high level of artificial intelligence (AI) in training and development and 28.4 percent of the respondents have a low level of artificial intelligence (AI) in training and development.

Influence of personal profile, Level of artificial intelligence (AI) in training and development of the respondents

Variables	Statistical tool	Value	Result
Age and artificial intelligence (AI) in training and development	Chi-Square	7.605(a) (P=.000 < .036)	Significant
Gender and artificial intelligence (AI) in training and development	Chi-Square	2.754 (a) (P=.000 > .607)	Not Significant
Marital Status and artificial intelligence (AI) in training and development	t-test	t=8.295 P = .010< 0.05	Significant
No. of Dependents and artificial intelligence (AI) in training and development	t-test	t=5.205 P = .000< 0.05	Significant
Locality and artificial intelligence (AI) in training and development	t-test	t=9.295 P = .000< 0.05	Significant
Socio Economic Background and artificial intelligence (AI) in training and development	ANOVA	F=8.115 P = .030< 0.05	Significant
Educational Qualification and artificial intelligence (AI) in training and development	ANOVA	F= .646 P = .425> 0.05	Not-Significant
Occupation and artificial intelligence (AI) in training and development	ANOVA	F=8.295 P = .000< 0.05	Significant
Monthly Income (in Rs.) and artificial intelligence (AI) in training and development	ANOVA	F= .506 P = .624> 0.05	Not-Significant
Year of experience and artificial intelligence (AI) in training and development	ANOVA	F= 10.192 P = .010< 0.05	Significant

- There is a significant association between Age and the level of artificial intelligence (AI) in training and development of the respondents.
- There is a no significant association between gender and the level of artificial intelligence (AI) in training and development of the respondents.
- There is significant difference in the marital status and the level of artificial intelligence (AI) in training and development of the respondents.
- There is significant difference in the number of dependents and the level of artificial intelligence (AI) in training and development of the respondents.

- There is significant difference in the locality and the level of artificial intelligence (AI) in training and development of the respondents.
- There is significant difference in the socio economic background and the level of artificial intelligence (AI) in training and development of the respondents.
- There is no significant difference in the education and the level of artificial intelligence (AI) in training and development of the respondents.
- There is significant no difference in the occupation and the level of artificial intelligence (AI) in training and development of the respondents.
- There is no significant difference in the monthly income and the level of artificial intelligence (AI) in training and development of the respondents.
- There is significant no difference in the year of experience and the level of artificial intelligence (AI) in training and development of the respondents.

Recommendations

- IT companies should integrate AI-enabled Learning Management Systems (LMS) to personalize training, track employee progress and suggest role-specific learning modules.
- Periodic surveys and assessments should be conducted to identify current skill levels, AI awareness and training needs of employees in different job categories.
- Use AI algorithms to deliver adaptive learning pathways tailored to individual employees, ensuring faster skill acquisition and higher retention rates.
- Introduce basic AI literacy training across all levels, covering ethical use, data privacy and responsible AI application in the workplace.
- Training should combine AI-driven content delivery with human trainers/mentors for guidance, contextual insights and emotional support.
- Deploy AI-enabled analytics to provide real-time feedback on learning progress and job performance, helping employees make quick improvements.
- Ensure strict guidelines on data privacy, intellectual property protection and ethical considerations while using AI in training.
- Leverage AI-driven chatbots, discussion platforms and virtual simulations to promote teamwork, problem-solving and collaborative learning culture.
- Track metrics such as productivity improvement, skill enhancement, employee retention and reduced training costs to evaluate AI's impact.
- Collaborate with Coimbatore-based universities, training institutes and AI startups to co-develop training modules and keep employees updated with industry-relevant skills.

CONCLUSION

Artificial Intelligence (AI) is rapidly transforming the landscape of training and development in IT companies, including those in Coimbatore districts. By integrating AI-powered tools, organizations can provide personalized, adaptive and efficient learning experiences that align with employees' specific roles, skills and career goals. AI not only accelerates knowledge acquisition and enhances learning retention but also facilitates continuous performance monitoring, real-time feedback and data-driven decision-making in talent development. The study highlights that the adoption of AI in employee training improves productivity, reduces training costs and fosters a culture of continuous learning and innovation. However, effective implementation requires careful attention to ethical considerations, data security and human oversight to ensure responsible use. Moreover, combining AI-driven approaches with mentorship and collaborative learning enhances the overall effectiveness of training programs. According to the findings, less than half of the respondents 40 percent of the respondents have moderate level of artificial intelligence (AI) in training and development, 31.6 percent of the respondents have high level of artificial intelligence (AI) in training and development and 28.4 percent of the respondents have a low level of artificial intelligence (AI) in training and development.

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