



Role of Technological Intervention in Employee Retention: with special reference to AI driven solutions

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Abstract:

In today's cutthroat employment market, employee retention is a major problem for businesses. High personnel turnover has a detrimental influence on productivity, knowledge retention, and organizational culture in addition to incurring large financial expenses. By utilizing digital tools and processes, technological intervention has emerged as a viable strategy to improve employee retention. The numerous technological intervention that businesses may use to increase employee retention are examined in this research study, including employee engagement platforms, data analytics, and AI-driven solutions. The possible advantages, difficulties, and ethical issues related to using these technological interventions are also covered in the study. The results emphasize the value of a human-centered strategy and strategic implementation when employing technology for staff retention.

Keywords: Employee retention, Technological intervention, Employee engagement, Data analytics, Artificial intelligence.

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1. Introduction: Due to the growing competition for qualified personnel, employee retention has become a key challenge for organisations across all industries. High turnover rates affect organisational effectiveness, productivity, and knowledge retention in addition to the direct financial expenses of recruiting, onboarding, and training. Organisation are using technology interventions as a way to improve staff retention in order to deal with this problem.

With an emphasis on employee engagement platforms, data analytics, and AI-driven solutions, this research study examines the possibility of technology intervention in enhancing employee retention.

2. Technological Interventions:

2.1 Employee Engagement Platforms: Platforms for employee engagement are digital solutions that help with employee appreciation, cooperation, and communication. These platforms give staff members a central location to acquire pertinent information, take part in debates, and be recognised for their contributions. staff engagement systems may have a big influence on staff retention by encouraging a feeling of community and deep connections. Tools for peer recognition, virtual collaboration spaces, and chat capabilities all contribute to a productive workplace and higher levels of employee happiness.



Feature	Description
Centralized Communication and Collaboration	Facilitates communication and collaboration among employees.
Peer Recognition Tools	Allows employees to recognize and appreciate each other's contributions and achievements.
Virtual Team Spaces	Provides dedicated virtual spaces for teams to collaborate, share information, and work together.

Table 1: Employee Engagement Platform Features

2.2 Data Analytics: Understanding employee behaviour, seeing patterns, and foreseeing attrition issues are all made possible by data analytics. Organisations may learn more about the variables affecting employee retention by analysing data from a variety of sources, such as employee surveys, performance indicators, and departure interviews. Employees who are at danger of quitting can be identified using

predictive analytics models, allowing for the implementation of preemptive intervention techniques. Data analytics also makes it possible for organisations to make data-driven decisions to enhance their retention strategy by assisting in the identification of trends and connections between employee engagement, job satisfaction, and retention.

Insight	Description
Employee Satisfaction and Engagement	Measures and analyzes employee satisfaction levels to identify areas of improvement.
Attrition Risk	Predicts and identifies employees at risk of leaving the organization.
Performance Trends	Analyzes performance metrics and identifies correlations with retention to inform decision-making.
Feature	Description
Centralized Communication and Collaboration	Facilitates communication and collaboration among employees.
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Table 2: Data Analytics for Retention Insights

2.3 Artificial Intelligence (AI)-Driven Solution: The potential for improving staff retention with AI-driven solutions is substantial. Employee feedback, sentiment, and engagement data may be analysed using

natural language processing (NLP) algorithms to produce individualised insights and suggestions. AI-powered chatbots may assist employees in real-time, respond to their questions, and advise them on chances for professional



growth. Utilising immersive and interesting training experiences, virtual reality (VR) and augmented reality (AR) technology may boost employee happiness and lower attrition. Ethics

issues including data protection, transparency, and justice must be carefully considered before implementing AI-driven solutions for staff retention.

Solution	Description
Natural Language Processing	Analyzes employee feedback, sentiment, and engagement data to provide personalized insights and recommendations.
AI-powered Chatbots	Offers real-time support to employees, answering queries and providing guidance on various topics.
Virtual Reality and Augmented Reality	Utilizes immersive technologies

Table 3: AI-driven Solutions for Employee Retention

These examples provide a visual representation of how technological interventions can be implemented within organizations to enhance employee retention. It's important to customize these interventions based on the specific needs and goals of each organization.

3. Literature Review:

According to Johnson, Griffith & Griffen (2000) retention can be further categorized as functional or dysfunctional. When non-performers leave and performers stay, it is identified as functional, and can assist organizations to increase optimal performance (Johnson et al, 2000). Abbasi & Hollman (2000) documented that on the contrary, when non-performers stay and performers leave, retention is highly dysfunctional, and damages organizational innovation and performance. According to Murnane, Singer, & Willett (1991); Shen (1997); Stinebrickner (1998); Theobald, (1990) Providing higher salary and better benefits are the most significant predictor of teacher's career longevity. Darling-Hammond (2003) proposed that on an average teacher's salaries are about 20 percent lower than that of other professionals with comparable educational experience in the private industry. The best way to keep teachers is to pay them more, according to instructors who have quit the profession, both new and seasoned. The best way to keep teachers is to pay them more, according to instructors who have quit the profession, both new and seasoned. Numerous academic contributions make hypothetical

arguments about the immense potential of new technologies for labour and society, which sparked a lot of position papers. Furthermore, it is still entirely unknown what effects recent technologies, such as using robots, automated systems, or artificial intelligence, will have on certain professions. It was argued that job tasks change as a result of technology changes by studying what workplace technologies really "do" in the workplace (Autor et al., 2003; Autor, 2004). The labour duties and the circumstances in which they must be completed characterize jobs. This outlines the required skills, or the possible ability to do a task (e.g., Ellström, 1997). As a result, CVET must be aware of the changes that technology brings about in terms of work duties and the ensuing features of work. Only then will CVET be able to determine the competencies that workers must possess and design learning environments that support the acquisition of these competencies. According to Mulder et al. (2015), these insights may be utilised to identify the consequences for the following elements of formal learning environments: content, didactics, trainer behaviour, assessment, and resources. The cognitive flexibility theory (Spiro et al., 2003) holds that in poorly structured settings, learners are expected to forge their own learning routes. The development of self-organizing and self-regulation methods may be aided by the coherent use of such models, which are frequently based on constructivist learning theories.



Additionally, incorporating technology into learning settings may boost participant interactions, particularly those that are centred on cooperative and collaborative learning (Dillenbourg et al., 2009). If properly constructed, technology in learning settings may be utilised to nurture the other necessary abilities in addition to boosting interactions in learning and cooperation (Vosniadou et al., 1996; Littlejohn and Margaryan, 2014).

The component that depicts evaluation deserves more consideration while keeping in mind that the coherence of components is a crucial criterion for the design of learning environments (Mulder et al., 2015). The assumption that the style of assessment has an effect on how learning occurs is supported by research (Gulikers et al., 2004; Dolmans et al., 2005). As a result, it may be utilized to purposefully assist and guide learning processes.

Only when all these factors are taken into account can CVET interventions successfully and sustainably support the aforementioned goals, including encouraging a willingness to change in relation to technologies, effective technology use, and personal development in the context of technological developments.

4. Benefits and Challenges: There are several advantages to using technology to improve staff retention. First of all, these initiatives give organisations real-time data and insights so they can be proactive in addressing retention issues. Additionally, technology may boost employee engagement by encouraging a sense of recognition, belonging, and community. Thirdly, AI-driven solutions may offer tailored interventions based on individual requirements and preferences and personalise the employee experience. But there are a number of difficulties to take into account. Obstacles might include implementation costs, data protection issues, and staff technical proficiency. A human-centered approach is also important, as depending only on technology without it might result in disengagement and unhappiness.

5. Successfully implemented technological interventions for employee retention:

- **Google:**Google is renowned for its cutting-edge method of keeping employees. They deploy a variety of technical tools, such as Google+ and Google Hangouts, employee engagement platforms that promote communication and teamwork among employees. Google also employs data analytics to pinpoint elements that affect employee retention and happiness, enabling them to make data-driven choices to enhance their retention tactics.
- **IBM:**To improve staff retention, IBM has deployed AI-driven solutions. They use AI chatbots to assist staff members in real-time, respond to their inquiries, and provide tailored advice. In order to prevent the loss of important talent, IBM also employs data analytics to spot patterns and trends in employee turnover.
- **Airbnb:**Technology is used by Airbnb to encourage staff engagement and retention. The company has created an internal network called "Airbnb Workplace" that links staff members throughout the world and promotes communication and collaboration. This platform promotes a feeling of community and belonging by encouraging employees to share their experiences, ideas, and triumphs. It has significantly aided Airbnb in increasing staff retention.
- **Microsoft:**Microsoft uses AI-driven technologies and data analytics to improve employee retention. They do analyses on data from multiple sources, including performance indicators and employee feedback surveys, to spot possible attrition risks and take precautions. Additionally, Microsoft makes use of AI-powered technologies to personalise employee interactions, make recommendations for career



advancement, and deliver tailored interventions to enhance work happiness and retention.

- **Zappos:** Online shoe and clothes store Zappos makes use of technology advancements to improve staff retention. They have a platform for employee engagement called "Zappos Insider" that offers employees knowledge, opportunities, and tools for both personal and professional advancement. The platform promotes teamwork, rewards achievement, and unrestricted communication, building a good workplace and enhancing employee retention.

6. Ethical Considerations: Although technological intervention for employee retention seem promising, moral issues must come first. Employers are required to protect employee data privacy and openness in the gathering, storing, and use processes. Data should be anonymised and maintained securely after obtaining informed consent. In order to maintain justice and prevent prejudice, organisations should address any biases in algorithms and AI systems. To safeguard employee rights and advance a culture of trust, technology interventions should be implemented and used in accordance with a thorough ethical framework.

7. Conclusion: Significant chances to increase employee retention are presented by technological intervention. Platforms for employee engagement, data analytics, and AI-driven solutions provide effective tools for comprehending employee behaviour, increasing engagement, and customising the employee experience. Organisations must take into account the advantages, difficulties, and moral ramifications of these initiatives. To effectively use technology for employee retention, a planned and human-centered strategy is required. Organisations may build a supportive and stimulating work environment that promotes employee loyalty, happiness, and long-term retention by accepting technology innovations appropriately.

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