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Managing People

The impact of technology on training and development

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Introduction

Training and development are pivotal elements in enhancing individual and organizational capabilities.



Picture 1

Traditionally, training methods relied heavily on face-to-face interactions, instructor-led sessions, and printed materials.

However, with the rapid evolution of technology, a paradigm shift has occurred, introducing a plethora of digital tools and platforms.



Picture 2

The necessity for workforce training and development can be discerned by examining many significant historical milestones, which serve as indicators of the progression of organisational practises and educational ideologies.



Picture 3

- Apprenticeship Model (Ancient Times): In ancient civilizations, skills were often passed down through apprenticeship models.

- Craft Guilds (Middle Ages): During the Middle Ages, craft guilds emerged, formalizing apprenticeship systems.



Picture 4



Picture 5

- Industrial Revolution (18th-19th centuries): The rise of industrialization led to the need for standardized training to meet the demands of new technologies.

- World War II (1939-1945): The war effort highlighted the importance of quickly and effectively training large numbers of people.
- Human Resource Development (1960s-1970s): The field of Human Resource Development (HRD) emerged, broadening the scope beyond traditional training.
- Computer-Based Training (CBT) (1980s) and E-Learning & the Internet (1990s): The development of computers facilitated the evolution of computer-based training (CBT) programmes, which subsequently, in conjunction with the rapid development of the Internet, gave rise to e-learning platforms.



Picture 6



Picture 7

- Virtual Reality (VR) and Augmented Reality (AR) (Present): The present era sees the integration of immersive technologies like VR and AR into training and development.

Technology-Based Training Methods

- **Online Training Method**

This strategy comprises online courses that many individuals can take at their pace.

Pros

Access this training content whenever you want. The method is self-paced, so you can review till you understand.

Cons

May take a long time to finish a course. Individuals may experience a lack of motivation to engage in this activity.

- **Instructor-Led Training Method via Online**

The ILT (Instructor-Led Training) technique involves a trainer who offers lectures and provides practical demonstrations.

Pros

Teachers and students can see faces, the session is dynamic, and students may ask questions and get answers quickly.

Cons

Training classes have various comprehension, therefore course speed may not fit everyone. A multi-timezone remote team may struggle to meet participant availability requirements.

- **Immersive Training Method**

Participants acquire a skill by mimicking a real-life event in immersive training. Virtual and Augmented Reality, simulations, and virtual learning environments are often employed for this strategy.

Pros

This training strategy sustains participant engagement without risk. They can consume topics quickly and get instant feedback.

Cons

Long-term VR and simulation exposure may harm individuals. Participants cannot immerse themselves if the work environment is not fully simulated.

- **Artificial Intelligence (AI) and Machine Learning (ML)**

AI and ML technologies can personalize learning experiences, predict learner preferences, and optimize content delivery.

Pros

Adaptive learning paths based on individual progress. Predictive analytics for identifying potential challenges. Continuous improvement through data-driven insights.

Cons

Data Privacy Issues Large volumes of student data generate privacy and data use problems. AI and ML in training programmes may require significant upfront investment in technology, infrastructure, and personnel training.

Importance of Technology in Training and Development

Accessibility and Flexibility

- Technology enables anytime,
- Anywhere learning
- And everyone learning
- Examples: Degreed learning experience platform.



Picture 8

Personalization



Picture 9

- Adaptive learning platforms cater to individual learning styles and paces.
- Suitable for each specific requirement
- Example: AdaptiveU adaptive learning modules.



Picture 10

Interactivity and Engagement

- Gamification and simulations enhance learner engagement.
- Example: Duolingo's gamified language learning.

Risk free

- Surgical training using virtual reality
- Example: OSSO VR and PrecisionOS Virtual Reality are utilised surgical training for simulations prior to the actual procedure.



Picture 11

Benefits for Employees

Skill Acquisition and Upskilling

- Employees can acquire new skills relevant to their roles.
- Employees can improve their skills
- Example: LinkedIn Learning providing a wide range of courses.



Picture 12

The image shows the Coursera logo, which is the word "coursera" in a bold, blue, sans-serif font.

Picture 13

Time and Cost Efficiency

- Reduced time away from work and cost-effective compared to traditional training methods.
- Example: Coursera's accessible and cost-efficient courses.

Real-time Feedback and Performance Tracking

- Technology allows for immediate feedback and progress tracking.
- Example: Udemy's performance analytics for both learners and employers.



Picture 14



Picture 15

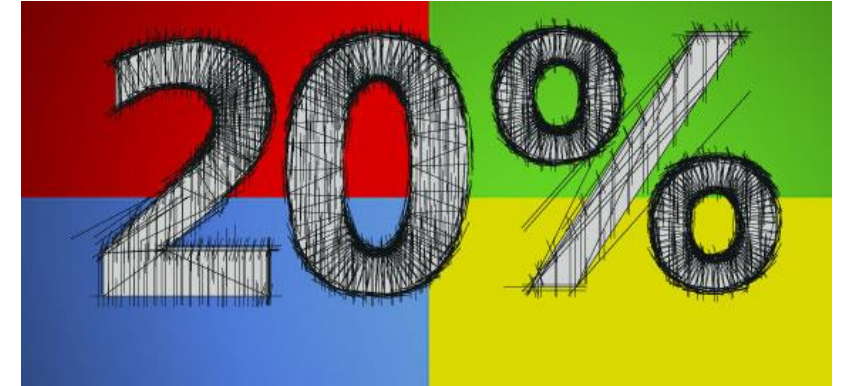
Social Learning and Collaboration

- Technology facilitates collaborative learning and knowledge-sharing.
- Example: Slack channels or Microsoft Teams for team-based learning.

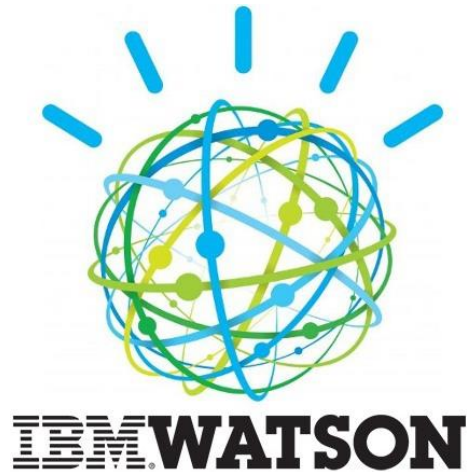
Benefits for Employers

Enhanced Productivity and Performance

- Upskilled employees contribute to improved productivity.
- Example: Google's "20% time" policy encouraging employees to spend time on learning and personal projects.



Picture 16



Picture 17

Data-Driven Decision Making

- Technology provides analytics for tracking training effectiveness.
- Example: IBM's Watson Talent Insights for data-driven HR decisions.



Picture 18

Global Talent Development

- Technology enables consistent training for a globally dispersed workforce.
- Example: Cisco's use of virtual classrooms for global training initiatives.

Talent Retention and Satisfaction

- Investing in employee development through technology promotes loyalty.
- Example: Amazon's Career Choice Program offering education benefits for fulfillment center employees.



Picture 19

Challenges and Considerations

- ***Accessibility and Inclusivity***

- Organizations that have technology-based training must ensure that it is accessible to all employees.
- Organizations must address challenges related to internet connectivity and device accessibility, especially for remote or diverse teams.

- ***Security and Data Privacy***

- Acknowledge concerns related to data security and privacy in technology-driven training.
- Implementing robust cybersecurity measures is essential to protect sensitive employee data, aligning with regulations like GDPR.

- ***User Resistance and Change Management***

- Potential resistance employees might have towards adopting new technology.
- Successful implementation requires a well-thought-out change management strategy, involving employees in the transition process

- ***Technical Issues and Downtime***

- Possibilities of technical errors, system downtime.

- Regular maintenance schedules and prompt technical support are critical to minimize disruptions in training activities

- ***Initial setup and maintenance costs***

- For the implementation of technological training systems (especially VR system) the initial costs are very high,

- With good management, these costs are amortized in relatively short time

Conclusion

In conclusion, the integration of technology into learning and development is not just a modern trend but a strategic imperative in today's dynamic work environment. As we've explored the impact of technology-based training methods, it becomes evident that:

Empowering Learners:

Technology empowers learners with unprecedented access, flexibility, and personalized experiences, enabling them to navigate their learning journeys at their own pace.

Enhancing Efficiency and Effectiveness:

The adoption of technology-driven methods enhances the efficiency of training programs, automating routine tasks and providing real-time insights for continuous improvement.

Fostering a Culture of Continuous Learning:

By leveraging adaptive learning paths, predictive analytics, and gamification, organizations can foster a culture of continuous learning, ensuring employees stay abreast of industry trends.

Balancing Technology with Human Touch:

Striking the right balance between technology and the human element is critical. While AI and ML bring efficiency, the human touch remains indispensable for mentorship, collaboration, and the holistic development of individuals.

Thank you!

Any Questions?

Reference:

- (2022) NHS choices. Available at: <https://www.guysandstthomas.nhs.uk/news/guys-and-st-thomas-uses-virtual-reality-boost-surgical-training> (Accessed: 20 November 2023).
- (2023) Osso VR. Available at: <https://www.ossovr.com/> (Accessed: 25 November 2023).
- Browse all products (2023) Surgical Science. Available at: <https://surgicalscience.com/simulators/all-products-gallery/> (Accessed: 25 November 2023).
- Das, T. (2021) The 5 best technology-based training methods, MUO. Available at: <https://www.makeuseof.com/best-technology-based-training-methods/> (Accessed: 25 November 2023).
- Free employee training (2015) AdaptiveU. Available at: <https://www.adaptiveu.io/> (Accessed: 25 November 2023).
- Guy’s and St Thomas’ conducts surgical training using virtual reality (2022) Digital Health. Available at: <https://www.digitalhealth.net/2022/09/guys-st-thomas-surgeons-training-virtual-reality/> (Accessed: 25 November 2023).
- Innovation strategies: Unpacking Google’s 20% time policy (2023) DANAconnect. Available at: <https://www.danaconnect.com/the-power-of-dedicated-innovation-time-unpacking-googles-20-time-policy/> (Accessed: 23 November 2023).
- LMS for partner, vendor, franchise training platform (2023) Samelane. Available at: <https://samelane.com/lms-for-partner-training/> (Accessed: 20 November 2023).
- Miro Engineering (2023) Medium. Available at: <https://medium.com/miro-engineering> (Accessed: 20 November 2023).
- Rob (2020) PrecisionOS partners with CONMED international following major breakthrough in portable arthroscopy education using virtual reality, PrecisionOS. Available at: <https://www.precisionostech.com/precisionos-announces-arthroscopy-in-vr/> (Accessed: 25 November 2023).
- The learning and upskilling platform (2023) Degreed. Available at: <https://degreed.com/> (Accessed: 23 November 2023).