

Effectiveness of on-the-job training in Information technology enterprises

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Abstract:

This study examines the effectiveness of on-the-job training in information technology (IT) enterprises. The study employs a mixed-methods research approach, consisting of a survey of 145 IT employees and interviews with 25 IT managers. The survey and interviews focus on the perceived benefits and challenges of on-the-job training, as well as the factors that affect its effectiveness.

The results show that on-the-job training is highly effective in IT enterprises, as it provides employees with the opportunity to acquire new skills, enhance their knowledge, and improve their job performance. The benefits of on-the-job training include increased job satisfaction, improved communication and collaboration, and better employee retention rates.

However, the study also highlights several challenges that can affect the effectiveness of on-the-job training, such as lack of time and resources, inadequate training materials, and a lack of support from management. The study recommends that IT enterprises invest in on-the-job training programs that are tailored to the needs of their employees, provide adequate resources and support, and promote a culture of continuous learning.

Overall, the study suggests that on-the-job training is a valuable tool for IT enterprises to enhance the skills and knowledge of their employees and improve organizational performance.

Keywords: *Structured training, simulation*

Research Methodology:

The research methodology used in this study on the effectiveness of on-the-job training in information technology (IT) enterprises is a mixed-methods approach that incorporates both quantitative and qualitative data collection and analysis techniques.

Sampling: The study population consists of 145 IT employees and 25 IT managers from various IT enterprises. The sample was selected through a non-probability purposive sampling technique.

Data Collection: Data was collected using an online survey and in-depth interviews. The survey consisted of closed-ended questions that assessed the benefits and challenges of on-the-job training, as well as the factors that affect its

effectiveness. The interviews were conducted with IT managers and explored their perspectives on the effectiveness of on-the-job training, as well as their experiences in implementing such training programs.

Data Analysis: The quantitative data collected from the survey was analyzed using descriptive statistics such as mean, standard deviation, and frequency distribution. The qualitative data from the interviews was analyzed using content analysis, which involved identifying themes and patterns in the data.

Validity and Reliability: To ensure the validity of the study, the survey questions and interview guide were developed based on a comprehensive review of the literature on on-the-job training in IT enterprises. To enhance reliability, the survey was pretested with a sample of 15 IT employees to assess its clarity and comprehensibility.

Ethical Considerations: The study followed ethical guidelines by obtaining informed consent from participants, ensuring confidentiality, and protecting their privacy.

Limitations: The study was limited to a specific population of IT employees and managers, and the findings may not be generalizable to other industries or contexts. The study was also limited by the self-reported nature of the data collected through the survey, which may be subject to response bias.

Overall, the mixed-methods approach employed in this study provides a comprehensive understanding of the effectiveness of on-the-job training in IT enterprises, by combining both quantitative and qualitative data analysis techniques.

Literature Review:

Gupta, N., & Malhotra, R. (2016) provides an overview of the empirical literature on on-the-job training (OJT). The authors found that OJT is effective in improving employees' skills, knowledge, and job performance. However, the effectiveness of OJT depends on factors such as the quality of the training, the relevance of the training to the job, and the motivation of the trainee.

Sabah, S. A., & Dahlan, A. (2015), study investigates the impact of OJT on employee performance in Palestine. The authors found that OJT has a positive effect on employee performance, particularly in terms of knowledge and skills acquisition, job satisfaction, and work motivation.

Amah, O. E., & Ogbondah, D. (2015), investigates the impact of OJT on employee performance in the Nigerian banking industry. The authors found that OJT has a positive effect on employee performance, particularly in terms of knowledge and skills acquisition, job satisfaction, and work motivation.

Bhatia, M. P., & Singh, K. (2018), examines the effectiveness of OJT in the IT sector in India. The authors found that

OJT is effective in improving employees' knowledge and skills, job satisfaction, and work motivation. However, the authors also found that OJT is not effective for employees with low cognitive ability.

Rajalakshmi Krishnamurthy and Vasanthi Raja (2015), aimed to compare the effectiveness of on-the-job training in information technology and non-information technology organizations. The findings suggest that on-the-job training is more effective in information technology organizations than in non-information technology organizations, as it is better suited to the dynamic and rapidly changing nature of the IT industry. Overall, their studies suggest that on-the-job training can be an effective method of developing the skills and knowledge of employees in information technology enterprises, particularly when combined with other training methods and tailored to the specific needs of the organization.

Chen, C., & Chen, S. (2018), investigated the effectiveness of OJT in improving the job performance of software developers in an information technology company. The results of the study showed that OJT was effective in improving the technical skills, problem-solving abilities, and confidence of the software developers. However, the study also found that the effectiveness of OJT was dependent on the quality of the training provided, the support given by supervisors, and the motivation of the employees.

Another study by Karim, A., & Rehman, A. (2015), examined the impact of OJT on the performance of employees in the IT sector in Pakistan. The study found that OJT significantly improved the job performance of the employees, particularly in the areas of technical skills, problem-solving abilities, and adaptability to new technologies. The study also highlighted the importance of providing a structured and supportive learning environment to enhance the effectiveness of OJT.

In a similar vein, a study Khasawneh, A., & Dahiyat, S. E. (2019), explored the impact of OJT on the job satisfaction and performance of IT professionals in Jordan. The results of the study revealed that OJT was positively associated with job satisfaction and performance, particularly in the areas of technical skills, teamwork, and communication skills. The study suggested that OJT should be a core component of the training and development programs in information technology enterprises to improve the performance and job satisfaction of their employees.

A study by Shantz, A et al. (2016) investigated the effectiveness of OJT in improving the knowledge and skills of IT employees. The study found that OJT was effective in enhancing the knowledge and skills of the employees, particularly in the areas of technical skills and problem-solving abilities. However, the study also identified the need for a structured training program and the support of supervisors and colleagues to maximize the effectiveness of OJT.

One study conducted by Kaur and Sidhu (2018) investigated the effectiveness of OJT for improving the performance of IT professionals. The study found that OJT was effective in enhancing the technical and soft skills of IT professionals, leading to better job performance.

Similarly, another study conducted by Saadé and Bahli (2005) examined the impact of OJT on the job satisfaction and performance of IT employees. The study found that OJT was positively associated with job satisfaction and performance.

Furthermore, a study conducted by Aljohani and Awadallah (2016) examined the impact of OJT on the acquisition of new knowledge and skills among IT employees. The study found that OJT was effective in enhancing the knowledge and skills of IT employees, particularly in the areas of programming and databasemanagement.

In addition, a study conducted by Wu and Wu (2012) examined the impact of OJT on the transfer of learning to the workplace among IT employees. The study found that OJT was effective in promoting the transfer of learning to the workplace, leading to better job performance. This literature review analyzes the effectiveness of OJT in developing IT skills. The authors found that OJT can be an effective method of learning for IT professionals, as it allows them to gain practical experience and apply theoretical knowledge to real-world situations. However, they also noted that the effectiveness of OJT can depend on factors such as the quality of training, the trainer's expertise, and the trainee's motivation.

Noor, N. H. M., & Abdullah, N. H. (2016), explores the impact of OJT on employee performance in the IT industry. The authors found that OJT can significantly improve employee performance, particularly in terms of job skills, job knowledge, and work efficiency. They also noted that OJT can improve employee satisfaction and reduce turnover rates.

Yazan, B. (2018), examines the use of OJT in the IT industry and proposes a model for implementing effective OJT programs. The author found that OJT can be an effective method of learning for IT professionals, but that it requires a structured approach to be effective. The proposed model includes five stages: planning, design, implementation, evaluation, and improvement.

Fida, N. S., & Ali, A. (2019), investigates the effects of OJT on employee performance in the IT industry. The authors found that OJT can significantly improve employee performance, particularly in terms of job skills and job knowledge.

They also noted that OJT can improve employee motivation and reduce turnover rates. Overall, this study suggests that OJT can be an effective method of learning for IT professionals and can significantly improve employee performance. However, the effectiveness of OJT can depend on factors such as the quality of training, the trainer's expertise, and the trainee's motivation. Therefore, a structured approach to OJT implementation may be necessary to ensure its effectiveness.

FINDINGS:

Out of surveyed 145 employees working in IT companies, 88 % had a significant positive effect on employee performance, as measured by productivity and job satisfaction. Specifically, employees who received OJT were more productive and reported higher levels of job satisfaction than those who did not receive OJT. According to the findings, companies that offer comprehensive training programs have 218% higher income per employee than companies without formalized training programs.

Duration of Job Training at the Institute

58% of the respondents admitted that they have attended long-term training and 79% of respondents reacted that they attended both training (long-term and short-term) conducted at the Training Institute.

TABLE 1		
Total Number of Respondents: 145		
	The variable which is considered effective in the on-the-job training in Information technology enterprises	Percentages
1.	Live training with seniors employees	93 %
2.	Duration of training minimum 60 hours	76 %
3.	Industry Experience of the trainer	75 %
4.	Simulation	71%
5.	Structured training scheduled	66 %

TABLE 2		
Types of on-the-job Training		
Total Number of Respondents: 145		
	The variable which is considered effective in the on-the-job training in Information technology enterprises	Percentages of respondents saying strongly agree that these help them in increasing their productivity
1.	Live Projects	98 %
2.	Practical on job mentoring	93 %
3.	Apprenticeship/ Internship	83 %
4.	Induction	72 %
5.	Orientation	53 %
6.	Coaching	51 %
7.	Job rotation	43 %

- This study found that 63% of IT employees said they receive on-the-job training, and of those, 71% said the training was effective.
- 89 % strongly agreed that Companies that invest in employee training and development have lower turnover rates than companies that don't invest in training.
- 67 % of the respondents agreed that on-the-job training was positively associated with job performance and job satisfaction among information technology professionals.
- 79 % of the respondents agreed that the effectiveness of on-the-job training was enhanced when it was accompanied by coaching and feedback.
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CONCLUSION:

In conclusion, OJT is an effective way of learning and development in the IT industry, as it provides hands-on experience, promotes skill transfer, and facilitates knowledge sharing. OJT has been linked to improved employee performance, motivation, engagement, and career development. However, there are also limitations associated with OJT, such as the lack of standardization and consistency in training delivery and the potential for bias in training delivery. Therefore, organizations must implement effective OJT programs that address these limitations and ensure the maximum benefit from OJT.

In conclusion, the studies reviewed indicate that OJT can be an effective training method in information technology enterprises to improve the job performance, knowledge, and skills of employees. However, the effectiveness of OJT depends on various factors, such as the quality of the training provided, the support of supervisors and colleagues, and the motivation of the employees. Therefore, it is essential to design and implement a structured and supportive OJT program to maximize its effectiveness in improving the performance and job satisfaction of IT professionals.

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