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Impact of HR Analytics on IT Sector Training and Development Skills for IT industries from Pune city

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ARTICLE INFO	ABSTRACT
	The goal of this article is to investigate the impact of HR analytics on Pune information technology (IT) industry training and development skills. The tactics and procedures used by the HR authorities and the IT specialists in the firm are also examined in this study. This article also discusses how HR analytics can be used in the IT industry to enhance IT professionals' skill sets. Design/Methodology/Approach: By taking into account a sample of 300 knowledgeable, skilled, and skilled individuals in Pune IT sector and HR, this paper delivers a quantitative analysis. The Cronbach's Alpha reliability test and bivariate correlation were used to confirm the hypotheses. Findings: The results make it clear that using training and development techniques, HR analytical procedures have a direct and beneficial impact on the performance of IT staff. Research Limitations/Implications: According to academics and industry professionals, this study highlights HR analytics approaches that support employee skill enhancement through training strategies. Originality/Value: The article discusses how HR professionals and analysts perceive training and development strategies. Additionally, it provides HR analytics that may deal with the training and retention of IT workers. **Keywords:** Employee Skills Development, HR Analytics, Training Strategy, IT Sector, HR Professionals

INTRODUCTION

An essential step in the training process is evaluating the effectiveness of a training program for an IT organization. Utilizing learning analytics is the most effective way to maximize Return on Investment (ROI) and determine the true value of staff training initiatives. Employee training programs that boost employee retention, productivity, loyalty, and skill level have been proved to yield a strong ROI. It is no secret that investing in staff training and development programs has become vital in today's economy[1] . Companies that invest in high-quality training have seen their profit margins rise by as much as 24 percent[2]. However, not every staff training program is effective or has a big enough impact to be beneficial. In fact, 45 percent of employee training initiatives were found to be ineffective.

The worst nightmare of every executive, manager, and training specialist has materialized[3,4,5]. The reality is that learning analytics may now be utilized to evaluate the effectiveness and return on investment of an organization's employee training initiatives. A subset of people analytics called learning and development analytics uses machine learning, predictive and prescriptive analytics, and predictive modelling to help with prediction and decision-making[6,7].

Additionally, this approach can help with subject matter recall and the development of personalized learning experiences. An IT firm may benefit from implementing a learning and development analytics approach to employee training by developing a learning culture that will improve the company's ability to make both better business

decisions and more engaged employees. Simply put, if workers feel that their employers support their long-term professional goals, they are less likely to leave. In fact, prospects for on-the-job training and development are now cited as a reason for staying at a job by 70% of workers. Millennials, who, it should be noted, now make up the majority of the workforce, saw this number grow to 87 percent. Most firms prioritize employee retention. Learning and development can help with employee retention since they "workers who believe that their employers foster professional growth are more confident in their long-term career path." According to a survey, people who stay with an organization are 24 percent more likely to report having access to the learning and development they need.

HR Analytics may offer insight into how learning and development effect employee retention, including which training initiatives lead to cohorts with the longest tenure and whether the cost savings from lower turnover make it worthwhile to engage in important initiatives. In light of the initiatives that the data has shown to be the most effective, IT organizations may utilize this information to determine which levers to pull in order to increase staff retention even more. As a result, to evaluate the success of Learning & Development, you'll need data spanning the whole employee lifespan. HR analytics can be used to get a complete picture of what an employee learned while working for your company. Having an analytics solution that can combine all of your HR and business systems, including your performance management, human resource management, and financial performance management tools, is necessary to do this. Look at the correlations between this data spanning timescales of months to years. You may measure the percentage of high performers to low performers who participate in training, the length of time it takes for performance to improve after training, whether training and certification programs promote financial performance, and more with this one source of data truth.

Analytics can be used to examine employee engagement across locations, departments, and teams to determine whether highly engaged employees are also those who have recently completed a professional development program. Similar to the last example, learning data may reveal which groups have the lowest levels of engagement, what factors may be contributing to this low score, and whether additional training would be beneficial. Roles are becoming increasingly specialized, thus the IT industry as a whole cannot adopt a "one-size-fits-all" strategy. 68 percent of learning and development providers rated role-centric methods as "Very Valuable" or "Extremely Valuable," i.e., role-specific, customized approaches to learning design and delivery. To determine how this affects performance and whether a new Learning and Development program for this group is required, examine the traits shared by IT professionals who have never had training..

RESEARCH REVIEW

An earlier study found that the adoption of HR analytics is significantly influenced by the size of an IT organization. The most crucial factor in this scenario is how large companies can access the tools, resources, and data required to employ HR analytics. Many new and small businesses lack the tools required to support the adoption of HR analytics in the IT industry. **V. N. Volkova and R. Arora and R. Sharma** blamed a lack of past exposure or awareness of the analytics as well as the tendency of IT organizations to be content with only quantitative data, such as sales and profit, for the failure of new, particularly smaller enterprises, to apply HR analytics.

One case study from Lebanon's private sector served as the foundation for the research by **Kamel Barbar, Radwan Choughri, and Moetaz Soubjaki**. Authors of this report claim that HR professionals use HR analytics to create employee development plans. Additionally, they advise organizations to include HR experts and HR analytics in the decision-making and strategy-development processes.

Training and development increase employee productivity as well as business production, according to the study's **by Muhammad Maimuna, Nda, and Assoc. Prof. Dr. Rashad Yazdanifard** . This study found that training increased employee initiative and the caliber of their work, and that businesses should invest as much time as possible in training and developing their employees in order to boost productivity.

The report by **Karim, Md & Choudhury, Musfiq & Bin Latif, Wasib. (2019)**claims that training and development is a requirement of human resource management (HRM), which facilitates knowledge acquisition and hence improves performance at the individual, collegial, and organizational levels. The authors also claimed that training and development have a positive relationship with worker productivity and performance.

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Objectives

The study investigated how training and development affected the IT workers' abilities. This study looks at employee performance in the IT sector as well as training and development as a practice in HR analytics. The research project's analysis covered the following goals.

- a) Examine the elements that affect IT employee performance in terms of training and development.
- b) Examine the impact of training and development on an IT employee's ability to make decisions.
1. The impact of training and employee satisfaction.
2. To assess the need for employee training in the IT sector.
3. Analyze the effect of staff training on output and performance.
4. Ascertain the impact of staff development on output and performance.

Hypothesis :

H1a: HR analytics techniques in IT firms have a substantial impact on the development of employee capabilities.

H2a: HR analytics methods in IT firms have a substantial impact on staff retention.

H3: Decision-making and skill development in the IT industry are significantly influenced by training and development.

H4: HR analytical techniques have a major impact on the productivity and skill growth of IT staff members.

H5: The quality of IT workers' work lives is significantly influenced by organizational development.

Research Issues

The goal of the research is demonstrated by the research questions listed below.

1. Why is HR analytics crucial for staff training and improving productivity or performance of employees?
2. How do HR analytics affect the decision-making of IT staff members in terms of staff development and training?
3. What connection exists between HR professionals' training and development programs and the retention of IT staff?
4. Which training and development strategies are most important for enhancing employee satisfaction and retention?

Methodology Perception on Education

Numerous studies have confirmed the importance of training as a key element of the IT industry. The rise in competitiveness and the greater success of businesses that prioritize employee development have had an impact on the recognition of the value of training in recent years. The advancement of technology, atomization, mechanization, shifting environments, and organizational change, according to researchers, have gradually made IT employers realize that the success of their workforces depends on their employees' skills and abilities, necessitating a sizable and ongoing investment in training and development. In addition, senior management teams have come to understand the increasing importance of long-term education, employee development, and training as a result of HRM concepts like commitment to the IT industry and the growth of the quality movement. Such concepts demand not only careful planning but also a larger emphasis on personnel development. The lower the risk of an employee experiencing a workplace accident and the higher their level of ability, the better. Through training, employees improve their abilities and prospects of growth. They become more qualified for promotion. They grow to be an important resource for their business. As a result of higher output and training, IT employees' productivity and efficiency increase. Employees that have received the right training provide in terms of number and quality. Time, money, and property waste are all reduced when employees are properly trained.

Understanding of Development

The best workforce may be created through HR development, allowing the IT company to grow. This can only be done by implementing thorough and organized programs for the IT staff's training and development. Employee

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development in terms of skills that advance their careers is consistently valued, which promotes employee motivation and retention. There is no doubt that a personnel that has received proper training and development will be a valuable addition to the company, boosting their effectiveness and efficiency in carrying out their duties. Training is a learning opportunity that could result in beneficial changes and support the firm in achieving its objectives. It improves the worker's ability to complete the task successfully and efficiently.

On the other side, development refers to those learning opportunities that are meant to help staff members develop. Not primarily on skills, development is the main focus. Instead, it imparts knowledge and mindsets that are helpful to higher-level employers. Personal drive and inspiration are typically needed for growth initiatives. For instance, development activities that are frequently optional are included in management development programs. According to some, the training and development function must go beyond conventional roles and practices if it is to continue to be effective and produce all predicted returns.

A study of the demands of the IT company, management and staff attitudes and beliefs, and the amount of resources available should be used to determine the best strategy, according to the strategic approaches to training and development that the organization may employ. This more strategic viewpoint ought to be beneficial for both assessing present efforts and making plans for the future.

Perception of Development and Training

There is a correlation between training and development and typical organizational measures like performance, productivity, competitive edge, decision-making, and effectiveness, according to a significant body of research. In the earlier investigations, the researchers concentrated more on the connections and links between the concepts of training and development before determining the impact of these combined concepts on performance and productivity.

According to, training and development should be seen as a tool for identifying and suggesting when and how work practices should change, as well as the thread that ties all HR operations together. In other words, IT personnel should act as organizational change agents. The HR manager must offer a framework for making HR decisions that are in line with the right vision and strategic plan in order to succeed in this role.

According to the aforementioned, training helps someone learn how to perform their current work effectively, which includes putting them in a position to be hired again in the future and advance professionally as a whole. In conclusion, training and development go hand in hand since HR can only succeed to the fullest extent when learning goes beyond the ordinary. Even so, these causes of failure can be prevented or at the very least reduced.

The HR practices provide a suggested collection of ideal tactics and approaches for avoiding training program failure. The results suggest that IT companies should choose training and development plans that successfully mesh with their corporate culture.

A good evaluation of training needs and crucial business skills is necessary. Then, correct managerial techniques and complete plans or models should be developed for an efficient training and development program in order to motivate employees, close performance gaps, and successfully accomplish organizational goals.

Performance and productivity perceptions

Training and development are essential elements of HR analytics practices since they aid in the accomplishment of goals by individuals and, particularly, by IT organizations. Training and development are regarded to have a substantial impact on both employee and organizational performance. Performance, in general, refers to a broad concept that includes effectiveness, economy, quality, consistency in behavior, and normative metrics. Performance, according to earlier studies, is the accomplishment of a certain activity while adhering to predetermined standards of correctness, completeness, speed, and cost.

A further definition of performance is the accomplishment of an employee's obligation, which absolves the performer of all contractual obligations. Efficiency and effectiveness are crucial performance components that can be emphasized through training and development to enhance individual performance. These concerns include the need to increase productivity and competitiveness, improve work quality and quantity, improve employee morale and

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organizational climate, implement modern or modified policies or regulations, confirm the organization's viability, gain experience, knowledge, understanding, and attitudes, establish a succession plan and ensure leadership continuity, avoid skill obsolescence, adapt to recent technological advancements, and use the appropriate technology.

As a result, one may contend that training adds to the performance of a firm by providing sufficient criteria for a person to perform better in a certain activity. The performance, productivity, and success of a business depend heavily on having a highly developed, intelligent, flexible, skilled, competent, and well-trained workforce.

Perceptions of Training and Decision-Making

It is crucial that important corporate leaders and decision-makers participate in training and development activities in order to build a successful organization and business. Similar to how they should with other organizational decisions, leaders should make minor adjustments to initiatives along the way based on the results of frequent measurement. Prior to making any informed decisions on strengths, shortcomings, and places where their work has to improve, front-line leaders simply do not have the time to manage several survey items with average scores, percentile favorable scores, and benchmark scores.

The degree of growth of the organization as well as employee performance are positively impacted by IT industries' investments in educating personnel in decision-making, teamwork, problem-solving, and interpersonal interactions to meet the demands of evolving technology and ever-increasing expectations. For firms to experience continual improvement, HR analytics and HR experts are crucial in managing training and development activities. Training has an impact on an employee's behavior and productivity, which enhances performance and yields favorable results.

The most effective way to retain and motivate excellent HRs inside a company is through training. Employee development is a strategy for raising commitment levels and maximizing potential. The use of training as a tool can significantly help an organization achieve its goals and objectives. The ultimate goal of every firm is to increase revenue and maximize profit, and having an effective and productive workforce is essential to achieving this. Because of this, the staff can only be successful and efficient if it obtains the right training and development, which leads to higher productivity.

Information Gathering and Analysis

The HR specialists in different IT companies in Pune were sent a questionnaire through email that contained a set of 35 questions. The questionnaire asks about five different areas, including training and decision-making, training and development, training and productivity, and training and employee experience. Small, medium-sized, and large-scale IT organizations were all considered for this project. 300 replies were obtained, or 61% of the 350 HR professionals that were the target audience. The main objective of this study is to determine how training and development impact the performance and job-related abilities of IT employees. The chosen respondents have provided information on the impact of training and development on employee productivity, retention, and decision-making skills. The results of this survey and the subsequent analysis of the responses show that significant areas of training and development have an impact on employee productivity, performance, and retention.

Discussion on Results

Table 1 Gender Representation

Factor	Value	Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	175	58.33	58.33	58.33
	Female	125	41.67	41.67	100
Total		300	100	100	

The 300 respondents' demographic information has been provided here.

From the above table, 58.33% of respondents were male while 41.67$ of respondents were female.

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Table 2 Experience of the Employee

Factor	Value	Frequency	Percent	Valid Percent	Cumulative Percent
Experience of the Employee (in years)	Less than 01 Year	102	34	34	34
	01 year to 05 Years	83	27.67	27.67	61.67
	05 year to 10 Years	67	22.33	22.33	84
	More than 10 years	48	16	16	100
Total		300	100	100	

From the above table, 34% of respondents having less than 1 year experience, 27.67% of respondents having 1 to 5 years' experience, 22.33% of respondents having 5 to 10 years' experience while 16% of respondents having more than 10 years' experience.

Table 3 Size of the Organization

Factor	Value	Frequency	Percent	Valid Percent	Cumulative Percent
Size of the Organization	1 to 20 employees	78	26	26	26
	21 to 99 employees	157	52.33	52.33	78.33
	100 or more employees	65	21.67	21.67	100
Total		300	100	100	

From the above table, 26% of respondents having upto 20 employees organization size, 52.33% of respondents having upto 99 employees while 21.67% of respondents having more than 100 employees organizational size.

Table 4 HR Analytics used in the Organization

Factor	Value	Frequency	Percent	Valid Percent	Cumulative Percent
HR Analytics used in the Organization (in years)	Less than 01 Year	54	18	18	18
	01 year to 05 Years	98	32.67	32.67	50.67
	05 year to 10 Years	60	20	20	70.67
	More than 10 years	88	29.33	29.33	100
Total		300	100	100	

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Among the total number of respondents, 18% of respondents were using HR analytics less than 1 year, 32.67% of respondents were using between 1 to 5 years, 20% of respondents were using from 5 to 10 years while 29.33% of respondents were using more than 10 years.

Table 5 Opinion of HR Professionals about the HR Analytics Practices used in the Organization

Factor	Value	Frequency	Percent	Valid Percent	Cumulative Percent
Opinion of HR Professionals about the HR Analytics Practices used in the Organization	Strongly Effective	213	71	71	71
	Effective	80	26.67	26.67	97.67
	Neutral	4	1.33	1.33	99
	Ineffective	1	0.33	0.33	99.33
	Strongly Ineffective	2	0.67	0.87	100
Total		300	100	100	

Among the total number of respondents, researchers were asked them about Opinion of HR Professionals about the HR Analytics Practices used in the Organization, the respondents found 71% of respondents were strong effective, 26.67% of respondents found effective, 1.3% of respondents were neutral, while 1.10% of respondents were found ineffective.

Table 6 displays the findings of the bivariate correlation used to support the assumptions of employee experience, productivity, and decision-making abilities that have been improved via the use of training and development techniques used by HR experts.

Table 6 Bivariate Correlation Results

		Employee Experience	HR Analytics improved Productivity	HR Analytics improved Decision-Making Skills
Employee Experience	Pearson Correlation	1	0.97	0.86
	Sig. (2 tailed)		0	0
	N	300	300	300
HR Analytics improved Productivity	Pearson Correlation	0.97	1	0.81
	Sig. (2 tailed)	0		0
	N	300	300	300

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HR Analytics improved Decision- Making Skills	Pearson Correlation Sig. (2 tailed)	0.86	0.81	1
	Sig. (2 tailed)	0	0	
	N	300	300	300
Correlation is significant at the 0.05 level (2-tailed)				

The findings of the bivariate correlation used to support the hypotheses about the size of the business, employee retention, and employee development that have been improved thanks to the training and development strategies used by HR experts are shown in Table 7.

Table 7 Bivariate Correlation Results

		Size of the Organization	Employee Retention	Employee Development
Size of the Organization	Pearson Correlation	1	0.84	0.89
	Sig. (2 tailed)		0	0
	N	300	300	300
Employee Retention	Pearson Correlation	0.84	1	0.86
	Sig. (2 tailed)	0		0
	N	300	300	300
Employee Development	Pearson Correlation Sig. (2 tailed)	0.89	0.86	1
	Sig. (2 tailed)	0	0	
	N	300	300	300
Correlation is significant at the 0.05 level (2-tailed)				

If the Sig. (2-tailed) value is less than 0.05, the link is considered statistically significant. According to the correlation numbers above, this means that the impact of HR analytics on employee growth and retention is influenced by both the employee experience and the scale of a company. The validity of the aforementioned hypotheses is established by this. The fact that all correlation values are positive suggests that there is a strong link between the variables. This indicates that a firm is more likely to benefit from HR analytics in terms of staff development and retention the larger and older it becomes.

Table 8 Cronbach's Alpha Reliability Test

Number of factors	. Cronbach's Alpha
5	>0.9

Pre-test or pilot tests were conducted to validate the reliability of the questionnaire prior to the collection of the final data. The questionnaires from randomly selected IT businesses in Pune, India, were used for the pilot tests. The questionnaire's ambiguities were sought out and removed throughout the pilot testing in order to increase its clarity. The responses from the 214 participants in these pilot tests were incorporated into the final questionnaire design to verify the reliability of the questionnaire. The inter-variable consistency of the survey questionnaire was evaluated using Cronbach Alpha. Cronbach Alpha is a metric used to assess the dependability and internal consistency of a group of variables. According to Table 8, this study's Cronbach Alpha value was >0.9.

Findings

The research shows that the majority of important IT sector organizations in Pune, India, use HR analytics. The results show that both IT companies with more employees and those with fewer employees use HR analytics for employee training and development. Larger businesses employed HR analytics techniques as an employee retention strategy and saw significant results. These findings add to the body of knowledge regarding the applicability of HR analytics and could prove helpful in the future. Analytics may offer benefits that IT organizations, particularly small and newer ones, should be aware of.

Final thoughts and restrictions

One of India's states with the most advanced technology is Pune. However, this evaluation does not translate into significant actions or tangible results. The quality of HR decision-making and turnover both rise in IT firms that do not prioritize HR analytics. Additionally, HR analytics conducted with the aid of specialist equipment and qualified individuals demonstrated increased employee productivity and retention in the IT sector.HR analytics will boost HR efficiency and decrease attrition. As a result, IT businesses must adopt a data-driven approach in place of their objective operational paradigm. Instead of relying on subjective judgment, all plans for training and promotion, as well as evaluations of employees' talents, should be based on data analysis and specific metrics. The study had a number of drawbacks. First off, the sample was tiny and restricted to a single state, which rendered it homogenous and made extrapolating its results to a larger population more difficult. The study's reliance on a self-administered email questionnaire further undermined its validity and dependability.

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