

HR ANALYTICS: A STUDY ON TRAINING AND DEVELOPMENT OF IT EMPLOYEES WITH SPECIAL REFERENCE TO CHENNAI CITY

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Abstract

The Training and Development is considered as most important task to reach organizational goals. HR Analytics in Training of employees helps to understand better what is required among their Employees to increase Motivation and Skills which ultimately improves the employee Performance. HR Analytics is a method used to measure and organize information related to employee that give clean insights about the requirement of an employee. It also helps the Organisations to maintain record and analyse information of specific employee with specific skill sets, this helps in motivating, gaining efficiency and improving talent quality. For every organization, their employees are very precious asset. Thus, it is extremely essential to analyse, assess, and predict employee requirements. In this competitive world where new innovations come as a hurdle, it is very important to implement the new technology in organisation. This paper highlights the importance of providing training to the employees in organisation and its influence on employee's better performance, organisational achievement and employees satisfaction.

Keywords: HR Analytics, IT Employees, Employees Performance, Employees Satisfaction.

1. INTRODUCTION

HR Analytics is that the process of collecting and analysing Human Resource Data so as to enhance an organizational functions and it helps in gathering analysing and organising the information associated with HR activities like Recruitment, Talent Management, Employees Engagement and Performance Management. Analytics creates data transparency, by which it

¹ Tilottama Singh, Snigdha Malhotra (2020), "Workforce Analytics: Increasing Managerial Efficiency in Human Resource" International Journal of Scientific & Technology Research, Vol.9, Issue 1, January 2020, ISSN NO:2277-8616.

² Abdul Quddus Mohammed (2019), "Hr Analytics: a Modern Tool in Hr for Predictive Decision Making" Journal of Management, Vol. 6, Issue 3, May – June 2019, ISSN NO: 2347-3940.

³ Sreenu Telu, Yoginder S. Verma (2019), "Human Resource Analytics: An Overview of Latest Development in Business Organizations", E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 6, Issue 2, May 2019.

benefits employees to look at their performance data and fill the skill gaps. within the competitive era, HR Executives have to generate and have greater analytical knowledge and skills. HR Analytics helps the organization to style strategic workforce planning by analyzing every aspect of HR metrics. Strategic HR framework will allow HR Executives and other users of HR analytics for a higher understanding of the linkages between HR programs and practices and outcomes that are important to both operations and to the underside line of the organization. For the successful implementations and practice of HR analytics, academicians can help within the successful adoption of HR analytics programs.

2. NEED FOR THE STUDY

The Concept of HR Analytics in training is a major activity that is used in all the Sectors, Industries and Organisations. It provides job related knowledge and improves work skills of the employees that provides a clear understanding of what is required to improve productivity, quality improvement, Industrial safety, reduction of turnover and learning time and ability to maintain an effective management team in an organisation. This paper studies about the training and development of the IT employees.

3. SCOPE OF THE STUDY

HR Analytics in training and development helps in reviewing the skills of their existing employees because the growth of people analytic helps the employees to do better job .and ensure that HR is fully aligned with the companies strategy, in order to make more accurate and favourable decisions.

4. LIMITATIONS OF THE STUDY

- This study has been conducted in short time, hence limited population is covered.
- The study has been focused on IT Employees of Chennai City only, hence the study cannot be generalized for the IT employees in India.
- The study is restricted to 137 samples.
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5. REVIEW OF RELATED LITERATURE

Tilottama Singh, Snigdha (2020)¹ say in the study that workforce analytics combines the need for analyzing the human resource aptly. The study examines the advantage of putting workforce

analytics and its tools are widely used in the field of marketing, sales, finance, investment, etc. the study has six steps formulated for effective workforce analytics, they are conceptualizing the central problem, apply a conceptual model in to business framework, obtaining relevant data, applying analytical methods, presenting the outcome to stakeholders, implementing action changes. Hr analytics is being practiced by only a small percentage of organisations and it is very much needed culture that is yet to be brought in fashion.

Abdul Quddus Mohammed (2019)² has showed in his study that Developments in Human Resources Management are fast being integrated with conforming changes in data and information processing. The domain of human resource analytics can be implicit as a data and analytical thinking-centred approach to Human Resources Management, is fast becoming an essential part of organisational setups. This is important because conspicuous decision-making cannot be reliably used diagonally industry kinds and initiatives as they will differ permitting to numerous borders such as sort of enterprise, the industry it is useful in, the number of employees and amount of resources it can spend for HR analytics.

Sreenu Telu, Yoginder S. Verma (2019)³ says in his study that Recent scholarship has displayed a growing interest in human resource analytics in business organizations that helps in gaining competitive advantage over others. This study explores the concept of HR analytics and its importance in the business industry and implementation of HR analytics and explores the solutions. Business organizations need to understand the growing relevance of HR analytics in business and exploit it to the optimum level to gain competitive advantage over others in the industry. It is suggested that an integrated approach that involves HR analytics as well as human judgment and managerial expertise will lead to better analysis in the organizations and empower HR department to be strategic relationship in the organization. It is therefore suggested that organizations should adopt and execute HR analytics and gain competitive advantage over others.

Kamel Barbar¹, Radwan Choughri¹&Moetaz Soubjaki (2019)⁴ has investigated in their study about the impact of HR analytics on the training and development strategy of private organizations and says that HR professionals anticipate on HR analytics to compose employee development procedure. Data from HR analytics is used to analyse potential outcomes of important HR and organization strategy decisions. The study inferred that businesses should incorporate HR professionals and HR analytics into the process of decision making and development strategy formulation.

Manuela Nocker and Vania Sena(2019)⁵ says that the purpose of this paper is to discuss the opportunities talent analytics as the availability of methodologies for the analysis of data used by organizations to manage their workforce. This paper consider the benefits and costs related with the use of talent analytics within an organization as well as to show the differences between talent analytics and other sub-fields of business analytics and the importance of trust in supporting the successful accomplishment of talent analytics project. One of the key perception is that if used in a proper way talent analytics may help the senior management team of an organization to align HR strategies to value creation.

Afsheen Majeed, Sidra Shakeel (2017)⁶ in their study explored the requirements of training and development in the organisations. Training and development is the most important for the organizational effectiveness. The training and development is the main tool of the human resource management in organizations. Training and development helps in the growth of the organization. It is found that training and development not only increased the skills and ability of the employees but also increase the efficiency of the organization and increase the relationship between the employees with the organization.

Arisha Siddiqui, Sana Iqbal (2017)⁷ has discussed that human resource is that the most dynamic and versatile and really essential resource among all other resources. this is often considered because the only resource which must be upgraded from time to time so they will make the simplest utilization of remainder of the resources of a corporation.

⁴ Kamel Barbar¹, Radwan Choughri¹&Moetaz Soubjaki (2019), “The Impact of HR Analytics on the Training and Development Strategy -Private Sector Case Study in Lebanon”, Vol. 10, No. 3; May 2019

⁵ Manuela Nocker and Vania Sena (2019) “Big Data and Human Resources Management: The Rise of Talent Analytics” doi:10.3390/soesci8100273, July 2019.

⁶ Afsheen Majeed, Sidra Shakeel (2017), Importance of training and development in the workplace, International Journal of Scientific & Engineering Research, Volume 8, Issue 4, April-2017 498 ISSN 2229-5518.

⁷ Arisha Siddiqui, Sana Iqbal (2017) “Empowering Skills of Indian Workforce through Training and Development” ISSN No: 2456 – 6470, Volume – 2, Issue – 1

Training and development may be a tool or a method to bridge the gap between upgraded skills of the workforce and want of the work. This study attempts to highlight the importance of skill development within the light of coaching and development furthermore as to spotlight the govt. Initiatives during this regard, because the workforce is moving from agriculture to manufacturing and repair sectors. Although employment generation is happening in commission industries still there's a desire to develop a skill set for employing the population of India in activities like agriculture, food industry, leather goods, tourism, construction and IT furthermore as for little and medium enterprises too.

Pooja Jain, Pranjai Jain (2017)⁸ have successfully devised a strategy to imbue numeric element into HRM called the theory of HR quantification. The speculation may be a combination of several innovative concepts, of which HR Analytics forms a component of this study. The organizations need to adopt new practices to survive within the business field, thanks to change in globalization, competition, availability of knowledge, and technology for organizations to be competent to survive. HR analytics helps to enhance employee work experience, decreased retention, better hiring practice, improved workforce planning, identifying attrition and its causes, identifying best-performing talent, to boost HR performance, predicts demand skills and positions which are needed to boost business performance and really important it transforms the role of HR into a strategic partner. Analytics creates data transparency, by which it benefits employees to look at their performance data and fill the skill gaps.

Sweta Anand and Utsav Kar (2017)⁹ has analyzed that there is tremendous ability of data analytics in understanding the past, present and future of the data associated with the human resource. The organisations which invest in data analytics have been found to reap the benefit in return for its investment. The entire HR arena and business leaders are turning into evidence-based, and more analytical which creates HR with continual challenges for applying analytics for metrics like workforce, compensation and benefits, training, performance and talent management, recruitment etc. that benefits the companies by taking well measured steps and makes smart use of technology like data analytics excel in their field.

⁸ Pooja Jain, Pranjai Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

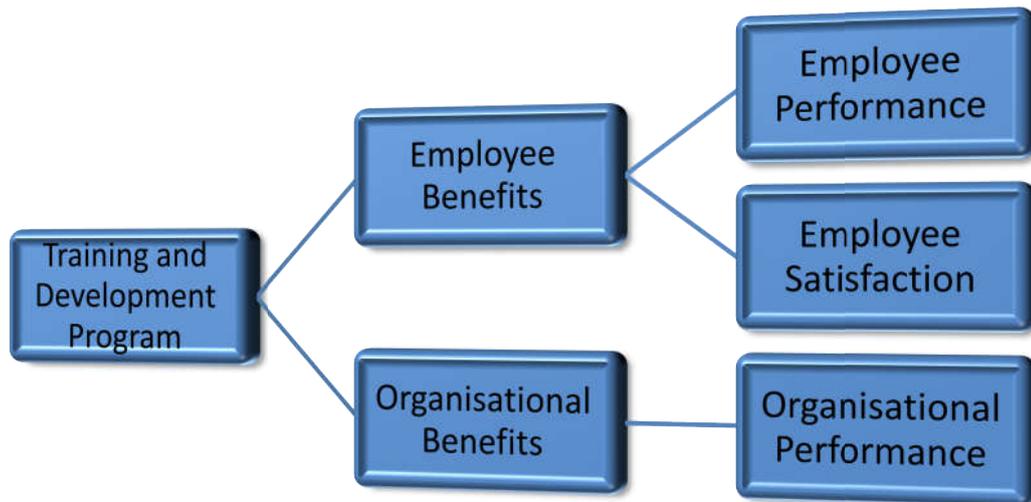
Maimuna Muhammad Nda & Dr. Rashad Yazdani Fard (2013)¹⁰ says in their study that Organizations investing in effective training and development for human resource tend to attain both short and future benefits. Training and development ultimately upgrade not only the productivity of employees but also of the organization. Companies have to invest in on-going employee training and development so as to both keep employees and achieve success. However, the foremost vital asset of each organization under stiff and dynamic competition is its human capital. Therefore, training and development is important to the productivity of organization's workforce thereby assisting them to be more committed to achieving the organizational goals and objectives and successively enhancing employees' effectiveness within the organization.

Debra L. Truitt (2011)¹¹ has studied that it is essential for training and development professionals to plan, implement, and evaluate the effectiveness of their programs in reducing disputes in workplace performance. This study shows the relationships between training experiences and attitudes about perceived job proficiency The findings of the study shows strong significant associations between those employees who fully agreed that they had updated training and positive training attitudes. The results also showed that those employees who fully agreed that they received effective and meaningful training demonstrated an increase in job proficiency.

6. RESEARCH GAP

The Review of related literature indicates that many studies have been conducted in many fields related to HR Analytics, but it has been identified that no research has been conducted on the Training and Development of IT Employees.

7. MODEL OF THE STUDY



8. OBJECTIVES OF THE STUDY

1. To study the influence of Training and Development on IT Employees Performance.
2. To find out the relationship between demographic factors and Training of employees.
3. To study the relationship between Training and Development with employees and organisational Performance.
4. To find the association between Training and Job Satisfaction of employees.

9. STATEMENT OF HYPOTHESES

1. To study the difference between gender with respect to Training and Development of employees.
2. To examine whether there is any significant difference between educational qualification and Job Performance of employees.
3. To test whether there is any significant difference between age and Training of employees.
4. To test whether there is any association between Designation and Employees opinion on requirement of Training and Development.
5. To test whether there is any relationship between Training and Job Satisfaction of employees.
6. To test whether there is a positive relationship between Training and employees Performance with organisational performance.

⁸ Pooja Jain, Pranjal Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

10. METHODOLOGY

This segment describes the methodology adopted to effectuate the goals of this study.

10.1 SAMPLING:

To determine the sample for the study, snow ball sampling is used which is a non-probabilistic sampling technique. The respondents were selected on the basis that the respondents should be an IT employee. 150 questionnaires were issued out of which 137 were completed and found suitable for data Analysis. This constitute a good response rate of 91%.

10.2 DATA COLLECTION:

The data was collected from both the primary and secondary source. The questionnaires were distributed to the IT employees for the data collection purpose.

10.3 DATA ANALYSIS AND INTERPRETATION

Pilot Study:

The purpose of the pilot study is to test the quality of the items in the questionnaire and confer the feasibility of the study. It was conducted by distributing the questionnaire to 30 respondents and Cronbach's Alpha method was applied and the value was 0.84. which is a good level of acceptable value.

Statistical Tools Used:

The statistical tools used in this study was Percentage Analysis for descriptive analysis and for inferential analysis the following statistical tools were used,

1. Percentage Analysis
2. Inferential Analysis
 - t-test
 - ANOVA
 - Chi square
 - Correlation
 - Regression.

Overall Reliability:

⁸ Pooja Jain, Pranjal Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

Cronbach's Alpha	No. of items
0.84	137

In order to test the reliability of the questionnaire, Cronbach's Alpha method was applied and the value is 0.84. which is considered as a good level of acceptable value.

Demographic Profile of IT Employees

Demographic Profile	Options	No. of respondents	Percent
Gender	Male	84	61
	Female	53	39
	Total	137	100
Age Group	20-29	31	22
	30-39	46	34
	40-49	35	26
	Above 50	25	18
	Total	137	100
Marital Status	Married	70	51
	Unmarried	67	49
	Total	137	100
Educational Qualification	Under Graduate	85	62
	Post Graduate	52	38
	Total	137	100
Designation	Lower Level	67	49
	Middle Level	45	33
	Upper Level	25	18
	Total	137	100

(Source: Computed)

From the above table it is observed that 61% of the sample respondents are Male within the Age Group of 30-39 years with 34%, and 62% majority of the respondents are Undergraduate and 51% of respondents are Married and 49% of the respondents are in middle level designation.

INFERENCE ANALYSIS

⁸ Pooja Jain, Pranjal Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

Hypothesis 1

To study the difference between gender with respect to Training and Development of employees.

H₀: There is no significance difference between Male and Female with respect to Training and Development of employees.

H₁: There is a significance difference between Male and Female with respect to Training and Development of employees.

Independent sample t-test between Gender and Training and Development of employees

Factors	Gender				t-value	p-value
	Male		Female			
	Mean	S.D	Mean	S.D		
Training and Development	3.72	1.33	3.93	1.13	0.89	.078

(Source: Computed)

Note: Significant at 5% level.

Since P-value is more than 0.05, null hypothesis is accepted at 5% level. Therefore, there is no significance difference between Male and Female with respect to training and development of the employees.

Hypothesis 2

To examine whether there is any significant difference between educational qualification and Job Performance of employees.

H₀: There is no significance difference between Educational Qualification with respect to Job Performance of employees.

H₁: There is a significance difference between Educational Qualification with respect to Job Performance of employees.

Independent sample t-test between Educational Qualification and Job Performance of employees.

⁸ Pooja Jain, Pranjal Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

Factors	Educational Qualification				t-value	p-value
	UG		PG			
	Mean	S.D	Mean	S.D		
Job Performance	3.85	1.17	3.86	1.13	.067	.785

(Source: Computed)

Note: Significant at 5% level.

Since P-value is greater than 0.05, null hypothesis is accepted at 5% level. Therefore, there is no significance difference between Educational Qualification and job performance of employees.

Hypothesis 3:

To test whether there is any significant difference between age and Training of employees.

H₀: There is no significance difference between age and Training of employee.

H₁: There is a significance difference between age and Training of employee.

ANOVA between Age and Training of Employees

Variables	Age				F-value	P-value
	20 - 29	30 - 39	40 - 49	Above 50		
Training	3.63 (1.33)	4.07 (1.23)	3.69 (1.13)	3.73 (1.35)	1.009	.391

(Source: Computed)

Note: Value within bracket is S.D and outside bracket is Mean value. Significant at 5% level.

Since P-value is larger than 0.05, the null hypothesis is accepted at 5% level of significance with regards to age of employees. Thus, there is no significant difference between age with Training of employees. Based on the mean value the age group of 30-39 seems to be good at performance followed by other age groups.

Hypothesis 4:

To test whether there is any association between Designation and Employees opinion on requirement of Training and Development.

H₀: There is no association between Designation and Employees opinion on requirement of Training.

H₁: There is an association between Designation and Employees opinion on requirement of Training.

⁸ Pooja Jain, Pranjal Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

Chi-square between Designation of employee and requirement of Training

Designation	Opinion on requirement of Training		Total	Chi square value	P-value
	Yes	No			
Lower Level	51	19	70	3.01	.223
Middle Level	25	15	40		
Upper Level	15	12	27		

(Source: Computed)

Note: Significant at 5% level.

From the table it inferred that P-value is greater than 0.05, therefore the null hypothesis is accepted at 5% significance level. Hence, there is no association between designation and employees opinion on requirement of training. Based on Percentage 66% of respondents feels that training and development is essential for employees.

Hypothesis 5:

To test whether there is any significant relationship between Training and Job Satisfaction of employees.

H₀: There is no significant relationship between Training and Job Satisfaction of employees.

H₁: There is a significant relationship between Training and Job Satisfaction of employees.

Regression Analysis between Training and Job Satisfaction of Employees.

	Unstandardized Coefficients		Standardized Coefficients	t-value	p-value
	B	Std. Error	Beta		
Constant)	3.450	.302	-	11.429	.000**
Effective Training	.110	.078	.121	1.415	.159**
R ²	0.015				
R Value	0.121				
Adjusted R ² value	0.007				
F value	2.004				
P value	0.159				

(Source: Computed)

Note: ** denotes significant @1% level.

From the above table R value is representing positive correlation of 0.121 which indicates high degree of relationship between performance management with job achievement of IT employees.

⁸ Pooja Jain, Pranjal Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

Therefore, Job Satisfaction is found to be positively correlated with Training and Development with the value 0.007. as r value 0.121 is within the range of ± 1 there is a significant relationship between Training and Job Satisfaction of Employees.

Since P value is 0.000 null hypothesis is rejected.

Hypothesis 6:

To test whether there is a positive relationship between Training and Employees Performance with organisational performance.

H₀: There is no positive relationship between Training and Employees Performance with organisational performance.

H₁: There is a positive relationship between Training and Employees Performance with organisational performance.

Correlation between Training of Employees and Organisational Performance.

		Training helps in achievement of organizational goal	Training improves Employee Performance	Training is helpful in increasing Organizational Performance
Training helps in achievement of organizational goal	Pearson Correlation	1	.123	.186*
	Sig. (2-tailed)		.158	.028
Training improves Employee Performance	Pearson Correlation		1	.081
	Sig. (2-tailed)			.346

⁸ Pooja Jain, Pranjal Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

Training is helpful in increasing Organizational Performance	Pearson Correlation			1
	Sig. (2-tailed)			

(Source: Computed)

From the above table it can be observed that the independent variable Training has a positive and significant relationship with the dependent variables Employees Performance and Organisational Performance. The correlation between Training and Achievement of Organizational Goal is 0.123 and 0.188 which indicates 12.3% and 18.6% positive relation with 1% significance level. The correlation between Training Improves Employee Performance with Training Increases Organizational Performance has positively correlated with 0.346. i.e, 34.6% with 1% significance level.

11. RESULTS AND DISCUSSION:

11.1 FINDINGS OF THE STUDY

- In this study majority of the respondents are Male with 61%.
- The study reveals that majority of the respondents, i.e, 34% belong to 30-39 age group.
- In this study 62% of the respondents are Undergraduates.
- The study shows that 51% of the respondents are Married.
- Majority of the respondents 49% are in lower level designation.
- There is no significance difference between Male and Female with respect to Training and Development of the Employees.
- There is no significance difference between Educational Qualification and Job Performance of Employees.
- There is no significant difference between age with Training of employees
- The study shows that there is no association between designation and employees opinion on requirement of training.
- Job Satisfaction is found to be positively correlated with Training and Development within the range of ± 1 , thus there is a significant relationship between Training and Job Satisfaction of Employees.
- The correlation between Training Improves Employee Performance with Training Increases Organizational Performance has positively correlated with 34.6% with 1% significance level.

11.2 CONCLUSION

⁸ Pooja Jain, Pranjal Jain(2017), Concept Note On Hr Analytics: Integrating Strategic and Operational Level of an Organization, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 4, Issue 3, July 2017

⁹ Sweta Anand and Utsav Kar(2017) "Data Analytics and its Role in Human Resource Management", International Conference on Digital Innovation: Meeting the Business Challenges,

In the current scenario HR Analytics plays a very critical role in the field of Human Resource Management. The success of the organisations depends on HR Activities and process which results in overall betterment of the employees and improves their performance and provides the employees with job satisfaction and job achievement which results in good organisational performance. HR Analytics is all about understanding the requirement of the employees as well as the requirement of the organisation. Thus the study shows that the Training and Development of the Employees is related to the performance of the employees as well as the organisation. Hr Analytics seems to be a Simple process but it comprises of all the major and important terms related to Hr management. The employees performance directly influence the performance of the organisation and its growth. Effective training will result in improvement of the employees by acquiring proper knowledge and accustom to the changing need and requirement of the organisations.

11.3 SUGGESTIONS

Hr Analytics is used by many HR Professionals in many organisations other than IT Industries, thus the study can be incorporated in various other industries with many other variables and in different place.

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