A STUDY ON THE EFFECTIVENESS OF TECHNOLOGICAL IMPACTS DUE TO EMPLOYEE MONITORING SYSTEM IN IT INDUSTRY

BRIJESH SINGH
Research scholar from VTU, Belagavi & Associate Professor, Department of MBA, SJB Institute of Technology, Bangalore.
MAMATHA J
Research Guide from VTU, Belagavi & Professor and Head of Department, Department of MBA, SJB Institute of Technology, Bangalore.
PRAVEEN KUMAR SINHA
Associate Professor, Department of MBA, Dayananda Dagar Academy of Technology & Management, Bangalore.

Abstract- In recent days it's found that the role of technology is highly involved in the process of increasing the monitoring system on the employees and its having a positive impact on the efficiency of the employees as a result it helps organization to achieve the goals of the organization. This study mainly focuses on the impact created by employee monitoring tool. The main objective of the paper was to highlight the monitoring system of employee through the technology. Especially in the field of IT Industry. This monitoring system differs from the big organization to small organization. The researcher has selected the 200 respondents for the purpose of collecting the data and it was concluded that most of the employees may not like the close monitoring as it will be affecting the personal space of the employees. From the management perspective they feels that if there is a close monitoring system it will increase the employee productivity. This enhances the overall profit of the organization.

Keywords: Performance, Keystrokes, Screenshots, Emails and instant messaging.

INTRODUCTION

In recent days it's found that the role of technology is highly involved in the process of increasing the monitoring system on the employees and its having a positive impact on the efficiency of the employees as a result it helps organization to achieve the goals of the organization. The role of Technology in the field of IT industry is tremendous and the technology exist is only for short period. In IT companies its observed that employees need to work in the front of system and they need to complete the task. Till the time they

are there in front of monitoring system there working hours will be considered and if they are not available in that case it will not be considered.

REVIEW OF LITERATURE

Sadegh Feizollahi (2014) has done the research related to Technology with reference to Internet in the field of service industry. The researcher has divided the research in the two fields. One is towards the internet and another side is towards the e-commerce. The researcher has tried to establish the relationship between the many independent variables. The researcher has tried to prove the hypothesis between the technologies with reference to performance of the organization. The researcher has found and proved the hypothesis that from the customer's point of view technology has made the work easier for most of the e-commerce activities and it's helping the customers in manifolds But at the same time the researcher has found the negative impact on the organization performance. Even the hypothesis was not proven.

Silvia Akter (2017) the researcher has highlighted about the role of Technology for monitoring the performance of the employee from the Human resource perspective. It's found with the many research articles that most of the employees need the surveillance on them to perform better in the organization with the help of review of literature. In this article researcher has tried to establish the relationship between the monitoring system on the employees with reference to the creativity of the employees and safety of the employees. The researcher has concluded that most of the employees are not in favour of monitoring system as employee feels that there is an effect on the personal privacy and that leads to the negative impact on the organization growth.

Nadeem Maqbool (2014) the researcher has emphasizes on the improvement of technology in the banking sector and its impact on the performance of employee. The researcher has tried to do many reviews in the field of banking industry with reference to employee performance. Regression analysis statistical technique is used for statistical analysis purpose. Total 140 respondents have responded out of 270 questionnaires distributed for the data collection purpose. The researcher has concluded that employees are motivated due to advancement in technology and at the same time technology with training is also having positive impact. But concern is it's found with the result that even though with lot of training sessions arranged for employees doesn't have any impact on the performance of the employees.

Rovinj (2019) has conducted the research on employee with the reference to monitoring system the current digital world. The researcher has tried to bring the impact in the field of innovation. Its found with the many research articles and observational method that whenever there is a more amount of monitoring system on the employee it affects the

privacy of the employee in workplace and it directly affects the performance of the employee and in turn the performance of the organization. It will be good if both the parties that is management and the employee can discuss about the monitoring system and then make the policy as per the convenience of both.

PROBLEM IDENTIFICATION

There are numerous issues associated with the employee monitoring technology in organizations. The employees are not ready to accept the monitoring activities because they may feel that through the monitoring tool their privacy may be leaked to others. This study mainly focuses on identifying the impact created by employee monitoring tool with reference to IT employees. This study examines both positive and negative impact of these technologies on IT employees in Bangalore.

NEED OF THE STUDY

The impacts made on the employees by the technological changes have to be monitored continuously and necessary steps have to be taken by the management at the appropriate time. This paper examines the Impact of Employee monitoring tool in IT.

OBJECTIVES OF THE RESEARCH

❖ To analyze the concept of Employee Monitoring tool implemented in IT industry.

❖ To identify the effectiveness of technological impact on Employee Monitoring System in IT industry.

❖ To analyze the positive impact on Employee Monitoring Tool from organization point of view.

❖ To analyze the negative impacts of Employee Monitoring Tool from employees point of view.

HYPOTHESIS FORMULATION

H0: There is no association between the effectiveness of technology with reference to employee monitoring system.

H1: There is an association between the effectiveness of technology with reference to employee monitoring system.

RESEARCH METHODOLOGY

Data was collected through the field study and it was collected from the 200 respondents working in the IT companies. The structured questionnaire was designed and collected the data from the respondents through the social media and through the email.   The study is confined to employees working for Information technology organizations in Bangalore.

Sample size: 200

Sampling Technique

Convenience sampling method is used to choose target respondents for conducting survey through Questionnaire

Statistical Tools for Analysis used are as follows:

Chi-Square analysis

Percentage Analysis

Weighted Average Method.

DISCUSSION AND ANALYSIS

(i) Chi-Square Test:

   Ho – There is no relationship between gender of the respondents and the employee opinion about whether monitoring is essential for IT companies

   H1 – There is a relation between gender of the respondents and employee opinion about whether monitoring is essential for IT companies.

Table 1: Gender opinion on Employee opinion about monitoring is essential for IT companies (Observed Frequency)

Gender	Employee opinion about monitoring is essential for IT companies			Total
	Yes	No	Can't say	
Male	40	46	40	126
Female	30	14	30	74
Total	70	60	70	200

Table 2: Table 1: Gender opinion on Employee opinion about monitoring is essential for IT companies (Expected Frequency)

Gender	Employee Opinion about monitoring is essential for IT companies			Total
	Yes	No	Can't say	
Male	44.1	37.8	44.1	126
Female	25.9	22.2	25.9	74
Total	70	60	70	200

Table 3: Shows Chi-square analysis for Employee Opinion about monitoring is essential for IT companies

S. No.	Observed Frequency (O)	Expected Frequency (E)	(O-E)	(O-E)^2	(O-E)^2/E
i	40	44.1	-4.1	16.81	0.381179
ii	46	37.8	8.2	67.24	1.778836
iii	40	44.1	-4.1	16.81	0.381179
iv	30	25.9	4.1	16.81	0.649035
v	14	22.2	-8.2	67.24	3.028829
vi	30	25.9	4.1	16.81	0.649035
Total					6.868093

Degrees of Freedom: (m-1) * (n-1)

$$= (3-1) * (2-1)$$

$$= 2$$

Tabulated value of degrees of freedom 2 @ 5% level of significance = 5.99

The Calculated value > The Tabulated value. Therefore Ho is rejected.

Inference: There is a relationship between gender of the respondents and employee opinion about whether monitoring is essential for IT companies.

Table 4: Shows the Weighted Average Method to identify the appropriate employee monitoring system

Options	Strongly Agree (5)	Agree (4)	Neither Agree nor Disagree (3)	Disagree (2)	Strongly disagree (1)	∑XiWi	∑XiWi/15	RANK
Track Instant Messages	78	90	20	12	0	834	55.6	1
Track keystrokes operations	74	66	38	12	10	782	52.1333	2
Track Programs usage	64	72	42	12	10	768	51.2	3
Track client Application path	42	58	42	40	18	666	44.4	5
Track external web site list	48	50	54	40	8	690	46	4

$$W = \sum Xi * Wi / \sum Wi$$
$$\sum Wi = 5+4+3+2+1 = 15$$

Inference:

It is identified that "Track Instant Messages" is the appropriate system to monitor employee.

Summary of Findings

29% of the respondents are aged between18-24yrs, 28% of the respondents are aged between 25-31 yrs, 23% of the respondents are aged between 32-44yrs and 20% of the respondents are aged above 44. With regard to the Experience, 39% of the respondents are < 2 yrs, 34% of the respondents are 2-4 yrs, 20% of the respondents are 4-6 yrs and 7% of the respondents are > 6yrs. With respect to Employee monitoring is essential for IT companies, 35% of the respondents said 'Yes', 30% of the respondents said 'No' and 35% of the respondents said 'Can't say'. In respect of aware about monitoring inside the organization, 74% of the respondents said yes, 15% of the respondents said 'No' and 11% of the respondents said 'can't say'. In view of the management has included all the monitoring in their employee agreement polices, 66% of the respondents said yes, 28% of the respondents said no and 6% of the respondents said can't say. 59% of the respondents said 'Yes', 27% of the respondents said 'No' and 14% of the respondents said 'Can't say with respect to the intimation of employee agreement policy. Noticed about monitoring using remote PC, 68% of the respondents said 'Yes', 24% of the respondents said 'No' and 8% of the respondents said can't say. Remote PC monitoring can be a effective proof to look employees past performance, 33% of the respondents strongly agree, 34% of the respondents agree, 20% of the respondents neither agree nor disagree, 7% of the respondents disagree and 6% of the respondents strongly disagree. With regard to Management track employee's keystrokes operations, 37% of the respondents strongly agree, 33% of the respondents agree, 19% of the respondents neither agree nor disagree, 6% of the respondents disagree and 5% of the respondents strongly disagree. With respect to overall Satisfaction about the remote PC monitoring.

SUGGESTIONS

The employee awareness regarding the need for employees monitoring in IT have to be increased. The management can intimate their employees about the employee monitoring and the reason for the monitoring process. The management may include all the process of monitoring in their employee agreement polices. The intimation about the employee agreement policy to the employees has to be increased. They can clear their employees about the employee monitoring process. The remote PC software is essential for the management to track the employees working process inside the organization. The PC monitoring can be an effective proof to look past performance of an individual employee. The monitored information has to be shown to the employees to minimize the unwanted activities.

CONCLUSION

The Employee Monitoring Process is very essential for an organization. The employee monitoring process can track the internet usage, key strokes, application paths, visited website list & program usage analysis? The process of tracking removable drives read/write operations through remote PC can increase the security of data. The monitoring employee using remote PC can increase personnel productivity, protect company from fraudulent activity, intellectual property and trade secrets theft. The company's performance can be increased by Instant Message. From the employee point of view the remote PC monitoring can be an effective proof to look back their past performance. The efficiency of employee monitoring is increased when it is compared to past years. It is due to technological advancement in employee monitoring process.

REFERENCES

➢ Pierce, L., Snow, D. C., & McAfee, A. (2015). Cleaning house: The impact of information technology monitoring on employee theft and productivity. *Management Science*, *61*(10), 2299–2319. https://doi.org/10.1287/mnsc.2014.2103

➢ Houghton E, & Baczor L. (2020). *Workplace technology report: the employee experience. July*.

➢ Feizollahi, S., Shirmohammadi, A., Kahreh, Z. S., Kaherh, M. S., Imran, M., Maqbool, N., Shafique, H., Litwin, A. S., Akter, S., Eva, T. P., Sajjad Hossain, M., Connolly, R., Rezaei, M., Zare, M., Akbarzadeh, H., Mateescu, A., Nguyen, A., Handel, M. J., Yuvaraj, S., … Long, Y. (2014). Impact of Technological Advancement on Employee Performance in Banking Sector. *International Journal of Human Resource Studies*, *9*(1), 57. https://doi.org/10.5296/ijhrs.v4i1.5229

➢ Feizollahi, S., Shirmohammadi, A., Kahreh, Z. S., & Kaherh, M. S. (2014). Investigation the Effect of Internet Technology on Performance of Services Organizations with e-commerce Orientations. *Procedia - Social and Behavioral Sciences*, *109*, 605–609. https://doi.org/10.1016/j.sbspro.2013.12.514

➢ Akter, S., Eva, T. P., & Sajjad Hossain, M. (2017). Strategic Impact of High-Tech Monitoring on Employee Performance: An HRM Perspective. *World Review of Business Research Issue. Pp*, *7*(1), 45–57. http://www.wrbrpapers.com/static/documents/March/2017/4. Sajjad.pdf

➢ Imran, M., Maqbool, N., & Shafique, H. (2014). Impact of Technological Advancement on Employee Performance in Banking Sector. *International Journal of Human Resource Studies*, *4*(1), 57. https://doi.org/10.5296/ijhrs.v4i1.5229

➢ Connolly, R. (2019). *www.econstor.eu*.

➢ Rezaei, M., Zare, M., & Akbarzadeh, H. (2014). The Effects of Information Technology (IT) on Employee Productivity in Shahr Bank. *Applied Mathematics in Engineering, Management and Technology*, *9*(1), 1208–1214.

➢ Litwin, A. S. (2011). Technological change at work: The impact of employee involvement on the effectiveness of health information technology. *Industrial and Labor Relations Review*, *64*(5), 863–888. https://doi.org/10.1177/001979391106400502

➢ Mateescu, A., & Nguyen, A. (2019). Explainer: Workplace Monitoring & Surveillance. *Data & Society Research Institute*, *February*. www.datasociety.net

➢ Handel, M. J. (2003). *Implications of Information Technology for Employment.pdf*. *July*.

➢ Yuvaraj, S., & Professor, A. (2018). Article ID: IJMET_09_07_028 Cite this Article: Dr. S.Yuvaraj and R.Nadheya, A Study on the Role of Technology on Employee Behaviour and their Performance. *International Journal of Mechanical Engineering and Technology (IJMET*, *9*(7), 244–251. http://www.iaeme.com/IJMET/index.asp244http://www.iaeme.com/ijmet/issues.asp?JType=IJMET&VType=9&IType=7http://www.iaeme.com/IJMET/issues.asp?JType=IJMET&VType=9&IType=7

➢ *Human Resource Technology Weaving a Fabric of Organizational Change*. (2018).

➢ Briône, P. (2017). Mind Over Machines: New technology and employment relations. In *Acas Research Paper 02/17*. http://m.acas.org.uk/media/pdf/i/9/Minds-over-Machines-New-Technology-and-Employment-Relations.pdf

➢ Long, Y. (2009). The impact of information technology on the HR function transformation. *Business Administration HRM*, 1–81.

➢ Employee Monitoring Systems. 2002. Retrieved September 23, 2002 from the World Wide Web: Privacy. Gray Cary, Technology's Legal Edge. Retrieved September 23, 2002 from the World Wide Web: http://www.gcwf.com/articles/interest/interest_40.html

➢ Elder, L. (1999). Critical thinking: Teaching the foundations of ethical reasoning. Journal of Developmental Education, 22, (3). Retrieved May 30, 2002 from the World Wide Web: http://ehostweb9.epnet.com/delivery.asp?

➢ Eko, L. (2001).Many spiders, one worldwide web: Towards a typology of Internet regulation, Retrieved March 10, 2003, http://web9epnet.com/citation.asp?tb=1&UG=DBS+0%2ci%2c2%2c3%2c5+iN+en%2Dhttp://www.employee monitoring.com/solutions.htm

➢ Fusco, P. (1999) McCain seeks to build regulation-free Internet. Internetnews.com, Retrieved March 10, 2003, from http://www.internetnews.com/xSP/print.php/8_117931

➢ Gahtan, A. 2002. Monitoring Employee Communications. The Cyberlaw Encyclopedia. Retrieved September 23, 2002 from the World Wide Web: http://www.gahtan.com/alan/articles/monitor.htm

➢ Gose, B. (2002) Chronical of Higher Education: Supreme Court Weighs Whether Students can Sue under Privacy Law. Vol. 48, Issue 34. Retrieved June 26, 2002 from EBSCOhost website.

➢ Hartman, L. (2001). Perspectives In Business Ethics. Chicago: Irwin/McGraw-Hill.

➢ Henry, J. & Pierce, A. (2000, December). Judgments about computer ethics: Do individual, co-worker, and company judgments differ? Do company codes make a difference? Journal of Business Ethics, 28 (4), 307-322. Retrieved June 24, 2002 from the University of Phoenix Apollo Library Web Site: http://www.mapnp.org/library/ethics/ethxgde.htm

➢ Hindman, E. (1999). Divergence of duty: Differences in legal and ethical responsibilities. Journal of Mass Media Ethics, 14 (4), p. 213-231. Retrieved June 24, 2002 from the University of Phoenix Apollo Library Web Site: http://www.mapnp.org/library/ethics/ethxgde.htm

➢ Lee, Karen. (2002). Employee Benefit News: In the Soup. Vol. 16, Issue 6, p.41. Retrieved June 26, 2002 from EBSCOhost website.

➢ Lim, E. G. Vivien, (2002). The IT way of loafing on the job: cyberloafing, neutralizing and organizational justice. Journal of Organizational Behavior. 23, 675-694. Wiley InterScience (www.interscience.wiley.com). Received: 26 February 2001; Revised: 30 April 2002; Accepted: 2 May 2002