Assessing the Impact of Human Error Assessment on Organization Performance in the Software Industry

Shampave Paramanantham, Informatics Institute of Technology, Sri Lanka*

Sidath Liyanage, University of Kelaniya, Sri Lanka

ABSTRACT

The influence of human errors on organizations is wide-ranging concerning customer service, productivity, teamwork, quality, execution, decision-making, and loss (Irmi.com, 2018). When the employee makes an error, this may prompt an operational failure, effectively affecting whatever is being assessed. There is a commonly accepted connection between human errors and organizational performance. However, the theory is all hypothesis without confirmation since there is minimal literature writing in this research. Data was gathered from 365 employees of IT export companies in Sri Lanka. 5 people working as project managers in IT export companies were interviewed to get their opinion about human errors. The findings show that human errors such as skill-based, design, quality testing, and maintenance errors can significantly influence performance outcomes, namely sales growth, return on investment, customer satisfaction, innovation development, and product and service quality.

KEYWORDS

Colombo, Design Errors, Human Errors, Maintenance Errors, IT Export Companies, Organization Performance, Quality Testing Errors, Skill-Based Errors, Sri Lanka

INTRODUCTION

Humans make mistakes. That is the nature of the human. Sometimes those mistakes lead to a colossal disaster. Human errors occurred in ancient times. Some mistakes which occurred by humans in ancient times changed history. As per the research, human errors are the root cause of 70% to 90% of accidents in organizations (Ganguly, 2011a). Organizations are made up of humans and are the main reason for a successful business and better organizational performance. At the same, their mistakes lead to the bad performance of the organization.

Human errors can initiate at the personal level. In this current situation, organizations do not have a clear idea of the reason for the downfall of their organizational performance. Human errors are also one of the leading causes of failure. All humans make mistakes in their lifetime. At one point, all the humans are making mistakes within the organization. Those mistakes do not depend on age

*Corresponding Author

diversity or personal characteristics. Some small mistakes can create severe problems. To change organizational performance, these human errors need to be reduced. There are many examples of loss of money within the organization due to human error, and the organization's name went down. According to a StorageCraft survey (News and News, 2018), approximately 30% of IT professionals stated that human errors are the main reason for data loss. On the other hand, BakerHostetler reports (Bakerhostetler, 2016) mentioned that nearly 50% of incidents in organizations were held because of human error. In early 2017, the S&P company in the U.S.A faced a massive loss of approximately $160 million because Amazon Web Services was down for nearly 4 hours (Deltaxml, 2018). This happened due to human error.

This study is based on human errors occurring in everyday day-to-day life. It needs a critical evaluation of the factors affecting human error assessment and reduction of human errors to improve organization performance. In this study, a particular preference gave to Software development companies in Colombo that are doing exports. When the clients are in other countries, there are a lot of chances for mistakes. Sometimes there will be miscommunication. Human errors are a vital force in the software industry. Sometimes best developers also make careless mistakes, leading to a big failure time and money lost, which cannot be returned. This will affect organizational performance. So, the study included all age diversity people who are working as a developer. This research study entirely focused on problems occurring to human errors in the organization.

This study identified four hypotheses:

1. Relationship between skill-based errors and organization performance.
2. Relationship between design errors and organization performance.
3. Relationship between quality testing errors and organization performance.
4. Relationship between maintenance errors and organization performance.

After discussing organizational performance and human errors, analyzed whether there is any relationship between corporate performance and hypotheses. To do that, we distributed surveys and conducted some interviews within a particular time. Then we discussed limitations and future enhancement and conclusion with some recommendations to avoid human errors.

REVIEW OF LITERATURE

Afraid of failing is the most significant barrier to get success. "Early elimination of mistakes will improve software quality and reduce overall development cost." (Misnevs and Demiray, 2017b) Accepting this statement, many organizations are trying to reduce human errors to increase organizational performance, but human errors still play a significant role in organizational performance. Maxion and Reeder (2005) focused on software defect prevention by boosting developer self-regulating skills. Paul et al. (2010) discussed safety domains for road transport and future directions. As per Horberry et al. (2010), human factors must be considered to improve work performance during maintenance. Fuqun and Bin (2017) differentiated people with human error-proneness and developed a conceptual model to show the relations between coincident faults and performance levels in the software industry.

Organization Performance

The organization comes from the word "organism, "a system composed of parts with dependent personalities. Koontz and O'Donnell said, "It is the grouping of activities necessary to attain enterprise objectives and assignment each grouping to a manager with authority necessary to supervise it." To perform well, organizations need a systematic plan. Per Mitchell (1983), understanding performance is a collection of behavior, people, or tasks and overtime. Henri (2004) mentioned organizational

Related Content

Using Social Networks in Learning and Teaching in Higher Education: An Australian Case Study
Craig Deedand Anthony Edwards (2010). *International Journal of Knowledge Society Research (pp. 1-12).*
www.irma-international.org/article/using-social-networks-learning-teaching/43918

When Knowledge Management Drives a Strategic Transformation Project: The Case of a Brazilian Air Force Organisation
Alexandre Velloso Guimarães (2013). *Knowledge and Technological Development Effects on Organizational and Social Structures (pp. 210-223).*
www.irma-international.org/chapter/when-knowledge-management-drives-strategic/70571

Electronic Communities: Assessing Equality of Access
Eric Riedel, Marc J. Wagoner, Libby Dresel, John L. Sullivanand Eugene Borgida (2000). *Social Dimensions of Information Technology: Issues for the New Millennium (pp. 86-108).*
www.irma-international.org/chapter/electronic-communities-assessing-equality-access/29112

Exploring Meaning: The Implications of a Hyphen for Socio-Technical Theory and Practice
Elayne Coakesand Jim Coakes (2012). *Technological Change and Societal Growth: Analyzing the Future (pp. 1-35).*
www.irma-international.org/chapter/exploring-meaning-implications-hyphen-socio/62773

Rural Face and Sustainable Urban Liveability
Ramisa Shafqat (2021). *International Journal of Information Systems and Social Change (pp. 12-22).*
www.irma-international.org/article/rural-face-and-sustainable-urban-liveability/274971