

A Study on Employee Performance and Productivity Analysis using Dashboard Analytics at Glauben Technologies

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ABSTRACT

Employee performance and productivity are critical factors that significantly influence the overall success and growth of any organization. In today's competitive business environment, organizations increasingly rely on data-driven approaches to enhance workforce efficiency and achieve strategic objectives. This study focuses on analyzing employee performance and productivity using dashboard analytics at Glauben Technologies. The primary objective of the study is to understand how dashboard analytics assists organizations in effectively monitoring employee performance, improving productivity levels, and supporting informed decision-making processes. Dashboard analytics provides a clear and visual representation of key performance indicators (KPIs), enabling managers and HR professionals to easily track employee activities, evaluate work efficiency, and identify areas that require improvement. By converting complex data into interactive charts and graphs, dashboards simplify the process of performance evaluation and enhance managerial understanding. The study is based on both primary and secondary data sources. Primary data was collected through a structured questionnaire distributed among employees to gather their opinions and experiences. Secondary data was obtained from company records, academic journals, and relevant online resources. To analyze the collected data, various statistical and analytical tools such as percentage analysis, weighted average method, charts, and graphical representations were used to ensure clarity and accuracy in interpretation. Furthermore, the study examines several key factors influencing employee performance, including motivation, work efficiency, time management, training effectiveness, and the role of digital dashboards in tracking productivity. The findings of the study reveal that dashboard analytics enhances transparency, improves communication, and helps in identifying performance gaps. It enables managers to take timely actions and make faster, more accurate decisions.

Keywords: Employee Performance, Employee Productivity, Dashboard Analytics, Data Visualization, Performance Monitoring, Decision Making, Organizational Efficiency, Business Intelligence, Key Performance Indicators (KPIs), Workforce Management, Performance Evaluation, Data Analytics, Employee Engagement, Productivity Measurement, Digital Dashboards, Performance Tracking, Organizational Performance, Management Information Systems, Workplace Efficiency, Analytical Tools

INTRODUCTION OF THE STUDY:

This study focuses on the detailed analysis of employee performance and productivity through the use of a dashboard developed for Glauben Technologies. In today's fast-paced and competitive business environment, organizations must continuously monitor and improve employee efficiency to achieve their strategic goals. The primary objective of this project is to provide a clear, structured, and visual representation of key performance indicators (KPIs) that help in evaluating employee performance in an effective and systematic manner. The dashboard incorporates several important performance indicators, including employee efficiency, task completion rate, attendance records, work progress, and overall productivity levels within the organization. These indicators provide valuable insights into how employees perform their tasks and contribute to the overall success of the organization. By analyzing these metrics, management can gain a deeper understanding of employee strengths and weaknesses, enabling better workforce planning and performance improvement strategies. The dashboard is developed using analytical tools such as Microsoft Excel and Power BI, which are widely used for data analysis and visualization. These tools play a crucial role in converting raw and unstructured employee data into meaningful and easy-to-understand insights. Data is presented in the form of charts, graphs, tables, and interactive visual reports, which simplify complex information and make it more accessible for managers and decision-makers. As a result, the dashboard enhances the ability of managers to interpret large volumes of data quickly and accurately. One of the key advantages of this dashboard is its ability to provide a comprehensive overview of employee performance across different departments and time periods. It allows managers to track trends, compare performance levels, and evaluate progress over time. This not only improves transparency in performance evaluation but also ensures that employees are assessed fairly based on objective data. Furthermore, the dashboard serves as a valuable tool for HR managers, team leaders, and organizational decision-makers by enabling continuous monitoring of employee performance and productivity. It helps in identifying performance gaps, tracking individual and team progress, and recognizing high-performing employees. At the same time, it highlights areas where improvement is needed, allowing management to implement corrective actions such as training and development programs, workload adjustments, and performance improvement plans. In addition, the use of dashboard analytics promotes better communication within the organization by providing clear and consistent performance data. Employees can also benefit from this system as it gives them a better understanding of their own performance and encourages accountability and motivation to improve. Overall, this study emphasizes the importance of using performance and productivity dashboards as a modern analytical tool for organizations. These dashboards support data-driven decision-making, enhance transparency in performance evaluation, and improve operational efficiency. By implementing such systems, organizations like Glauben Technologies can optimize workforce productivity, strengthen employee engagement, and achieve higher levels of organizational effectiveness in a highly competitive business environment.

.INDUSTRY PROFILE:

The Information Technology (IT) and Analytics industry is one of the fastest-growing sectors in the global economy. It focuses on providing technology solutions, software development, data analytics, cloud computing, and digital transformation services to organizations across different industries. Businesses today generate large amounts of data, and the IT analytics industry plays a crucial role in converting this data into meaningful insights that support better decision-making and improved organizational performance.

The global IT services market has been experiencing rapid growth due to the increasing adoption of digital technologies, cloud computing, artificial intelligence, and big data analytics. The market size reached approximately USD 1.65 trillion in 2025 and is projected to grow to about USD 3.29 trillion by 2033, showing strong expansion as organizations invest more in digital infrastructure and data-driven systems.

One of the important segments within the IT industry is dashboard analytics and business intelligence tools. These tools help organizations visualize data through charts, graphs, and performance indicators. Dashboard software allows managers and executives to monitor business activities, track employee productivity, analyze operational performance, and make

strategic decisions based on real-time data. The demand for dashboard solutions is growing rapidly as organizations seek better ways to monitor complex IT systems and business processes.

In modern organizations, dashboard analytics is widely used in departments such as human resources, finance, operations, marketing, and project management. HR dashboards in particular help organizations track employee attendance, performance metrics, task completion rates, and productivity levels. These dashboards improve transparency and allow managers to quickly identify performance gaps and take corrective actions.

The IT analytics industry is also driven by the increasing use of Artificial Intelligence (AI), Machine Learning (ML), and big data technologies, which enhance predictive analytics and automate data analysis processes. These technologies enable organizations to analyze large datasets quickly and generate accurate insights for strategic planning and operational improvement.

In addition, the adoption of digital dashboards has significantly increased across industries such as banking, healthcare, retail, manufacturing, and telecommunications. Organizations use dashboards to monitor operational efficiency, improve service delivery, and support data-driven decision-making. Studies show that more than 60% of organizations now use dashboards for real-time data visualization and performance monitoring, demonstrating the growing importance of analytics tools in modern business management.

Overall, the IT and analytics industry plays a vital role in improving organizational efficiency, productivity, and competitiveness. With the increasing reliance on digital technologies and data-driven strategies, dashboard analytics has become an essential tool for businesses to monitor performance, enhance productivity, and achieve sustainable growth.

REVIEW OF LITERATURE:

AA Prayoga and M Hasanuddin (2025) studied the development of an employee performance monitoring information system using a web-based interactive dashboard. Their research highlights the importance of modern dashboard systems in tracking and analyzing employee performance effectively. The study explains how responsive web dashboards combined with Artificial Intelligence (AI) based analytics can help organizations monitor employee activities, measure productivity levels, and provide predictive performance insights. By using interactive dashboards, managers can easily visualize employee data, identify performance gaps, and take timely decisions to improve productivity and organizational efficiency.

V Zieglmeier (2024) examined the concept of people analytics and the concerns of employees regarding workplace monitoring systems. The study focuses on how dashboard design and data transparency influence employee acceptance of monitoring technologies. It highlights that when dashboards are designed in a user-friendly and transparent manner, employees are more likely to accept analytics systems used for performance evaluation. The research also explains how people analytics tools can support productivity analysis while maintaining employee trust and data privacy.

P Kersting (2021) discussed the importance of analytics in improving organizational performance and decision-making. The study explains that organizations that effectively use data analytics can gain a competitive advantage by making informed decisions. According to the research, analytics tools help improve productivity, enhance operational efficiency, and support digital transformation within organizations.

I. DATA COLLECTION METHOD:

The data for this study were collected using a quantitative survey method to gather self-reported data. The research employed a Descriptive research design. The primary data collection instrument was a structured questionnaire administered electronically. The questionnaire was created and distributed using Google Forms. This approach allowed for efficient collection of responses from a diverse group of users.

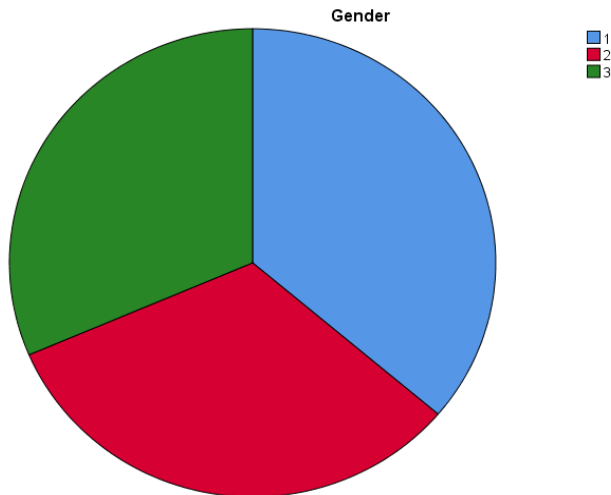
DATA ANALYSIS AND INTERPRETATION:

PERCENTAGE ANALYSIS:

PERCENTAGE ANALYSIS FOR GENDER

Gender

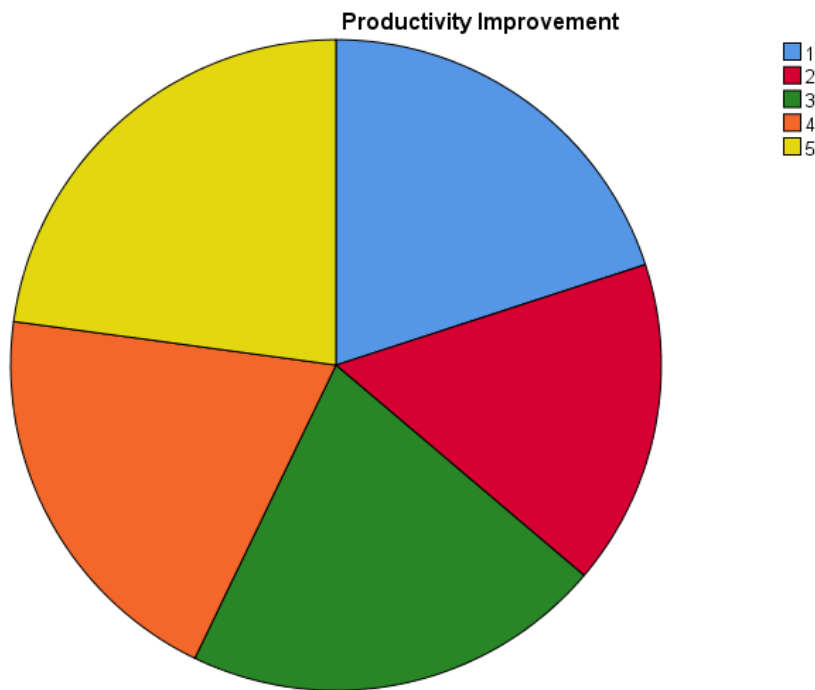
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	38	36.2	36.2	36.2
	2	34	32.4	32.4	68.6
	3	33	31.4	31.4	100.0
	Total	105	100.0	100.0	



Inference: The pie chart shows that 42% of respondents are male, 39% are female, and 19% belong to others. This indicates a nearly balanced gender distribution, with males slightly higher, ensuring fair representation in the study.

PERCENTAGE ANALYSIS FOR PRODUCTIVITY

Productivity Improvement					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	21	20.0	20.0	20.0
	2	17	16.2	16.2	36.2
	3	22	21.0	21.0	57.1
	4	21	20.0	20.0	77.1
	5	24	22.9	22.9	100.0
	Total	105	100.0	100.0	



Inference:

The data shows that perceptions of productivity improvement are **balanced with a slight positive trend**. The highest proportion (22.9%) rated 5, indicating strong improvement for some employees. However, 36.2% rated 1 and 2, reflecting limited improvement. With responses distributed across all levels, overall productivity improvement is mixed, suggesting scope for further enhancement.

CORRELATION ANALYSIS:

Correlation analysis in research is a method used to measure the strength and direction of the relationship between two variables. It helps to determine how changes in one variable are associated with changes in another, allowing researchers to assess the degree of influence one variable may have on the other variable.

Null Hypothesis (H_0):

There is no statistically significant linear relationship between adequate training and training productivity ($\rho = 0$).

Alternative Hypothesis (H_1):

There is a statistically significant linear relationship between adequate training and training productivity ($\rho \neq 0$).

Correlations

		Adequate Training	Training Productivity	Training Faster
Adequate Training	Pearson Correlation	1	-.056	-.048
	Sig. (2-tailed)		.571	.627
	N	105	105	105
Training Productivity	Pearson Correlation	-.056	1	-.014
	Sig. (2-tailed)	.571		.888
	N	105	105	105
Training Faster	Pearson Correlation	-.048	-.014	1
	Sig. (2-tailed)	.627	.888	
	N	105	105	105

Inference

The correlation coefficient ($r = -0.056$) indicates a very weak negative relationship between adequate training and training productivity. However, the p-value (0.571) is substantially greater than the chosen significance level of 0.05. null hypothesis accepted

REGRESSION ANALYSIS:

Regression analysis is a collection of statistical techniques used to estimate the relationships between a dependent variable and one or more independent variables. It helps assess the strength of these relationships and can be employed to model and predict future interactions between the variables.

Null Hypothesis (H_0): There is no significant difference among the group means. All groups have the same average score on Dashboard Tracking

Alternative Hypothesis (H_1): There is a significant difference among the group means. At least one group's mean score is different from the others.

ANOVA

Dashboard Tracking

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.849	3	2.283	1.058	.371
Within Groups	218.009	101	2.159		
Total	224.857	104			

Inference

From the ANOVA table, $F(3, 101) = 1.058$ with a significance value (p-value) of 0.371. Since the p-value (0.371) is greater than the commonly used significance level of 0.05, we accepted the null hypothesis.

This means there is no statistically significant difference between the groups in terms of Dashboard Tracking. Any differences observed in the sample means are likely due to chance rather than a real effect.

ANOVA ANALYSIS

ANOVA analysis, or Analysis of Variance, is a statistical method used to compare the means of three or more groups to determine if they are statistically different from each other. ANOVA calculates the variance between group means and within each group, then uses these values to test whether the observed differences in means are likely due to actual effects or random chance.

Null Hypothesis (H_0):

Productivity Improvement, Dashboard Transparency, and Dashboard Understanding have no significant effect on Satisfaction.

Alternative Hypothesis (H_1):

At least one of the predictors (Productivity Improvement, Dashboard Transparency, Dashboard Understanding) has a significant effect on Satisfaction.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.871	3	3.957	1.831	.146 ^b
	Residual	218.262	101	2.161		
	Total	230.133	104			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Productivity Improvement, Dashboard Transparency, Dashboard Understanding

Inference:

$$F(3,101) = 1.831, p = 0.146$$

Since $p(0.146) > 0.05$, we accepted the null hypothesis.

There is no statistically significant relationship between Productivity Improvement, Dashboard Transparency, Dashboard Understanding, and Satisfaction in this study.

FINDINGS OF THE STUDY:

1. Improvement in Task Completion

After implementing dashboard analytics at *Glauben Technologies*, the task completion rate increased significantly. Employees were able to meet deadlines more effectively due to clear performance visibility.

2. Increase in Productivity

Employee productivity improved as dashboards helped track utilization rates and target achievements. Employees became more focused on measurable goals.

3. Reduction in Cycle Time

The average time taken to complete tasks decreased, indicating better workflow management and efficient time utilization.

4. Better Performance Monitoring

Managers were able to identify underperforming areas quickly and take corrective action. Decision-making became more data-driven rather than assumption-based.

5. Enhanced Transparency and Accountability

Dashboard analytics created transparency in performance evaluation. Employees had clarity about expectations, which increased accountability.

SUGGESTIONS OF THE STUDY:

1. The organization should provide training programs for employees to understand dashboard analytics tools better.
2. The company should update dashboard data regularly for accurate performance monitoring.
3. Management should combine dashboard analytics with employee motivation and reward systems.
4. Advanced tools like Power BI and AI-based analytics can be used for better predictive analysis.
5. The company should encourage employee feedback to improve dashboard effectiveness.
6. Dashboards should be used as a continuous monitoring tool rather than only for periodic evaluation.

CONCLUSION OF THE STUDY:

The study concludes that dashboard analytics plays a highly significant and transformative role in analyzing employee performance and productivity within organizations. In today's data-driven business environment, organizations generate vast amounts of employee-related data, which can often be complex and difficult to interpret. Dashboard analytics helps overcome this challenge by converting raw and unstructured data into clear, visually appealing formats such as charts, graphs, and summary reports. These visual representations enable HR managers and organizational leaders to quickly understand performance trends, patterns, and insights, thereby supporting more effective and timely decision-making.

The dashboard developed for Glauben Technologies serves as an efficient tool for monitoring key performance indicators (KPIs), including task completion rates, employee efficiency, utilization rate, attendance, and overall productivity. By consolidating all relevant performance metrics into a single platform, the dashboard provides a comprehensive and real-time view of employee activities and contributions. This not only simplifies the evaluation process but also reduces the time and effort required for manual data analysis.

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This paper explains how HR dashboards enhance decision-making, predict employee behavior, and improve productivity.