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# "Role of Technology in Remote Work Culture and its impact on Employee Job Satisfaction and Employee Performance"

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## ABSTRACT:

The project aims to investigate the intricate dynamics between technology, remote work culture, job satisfaction, and job performance within the IT sector in Hyderabad. It seeks to achieve three primary objectives: firstly, identifying factors associated with technology implementations in remote work setups; secondly, evaluating the influence of work culture on job satisfaction and performance; and thirdly, examining how technology moderates the relationship between work culture and job satisfaction. Through thorough analysis and statistical methods, the study intends to provide insights into leveraging technology to enhance the positive impact of work culture on employee satisfaction and performance in remote work environments among IT professionals in Hyderabad.

KEYWORDS: Technology Initiatives, Remote work culture, Employee Job Satisfaction, Job Performance.

## **INTRODUCTION: -**

The contemporary employment landscape has witnessed a significant convergence of technology and remote work culture, reshaping traditional organizational dynamics. This study aims to delve into the multifaceted interplay between technology, remote work culture, employee job satisfaction, and job performance, with a focus on the IT sector in Hyderabad. By examining the impact of technological advancements and remote work practices on organizational dynamics, the study seeks to unravel their implications for contemporary organizational settings. Through empirical research and theoretical frameworks, the project aims to offer insights into leveraging technology to enhance organizational performance and employee well-being in remote work environments.

The purpose of this research is twofold: firstly, to understand how technology and remote work culture interact to influence job satisfaction and performance among IT professionals in Hyderabad, and secondly, to provide practical recommendations for organizations aiming to optimize their remote work practices. The study's scope encompasses a comprehensive exploration of the complex relationships between technology, remote work culture, job satisfaction, and job performance, drawing on insights from diverse academic viewpoints. By synthesizing findings from various research streams, the project aims to offer a nuanced understanding of the role of technology in shaping organizational dynamics and employee outcomes in remote work environments within the context of the IT sector in Hyderabad.

## THEORITICAL FLAME WORK AND HYPOTHESIS DEVELOPMENT:-

1) (H1): There is a significant relationship between technology initiatives and the identified factors.

2) (H2): Work culture has a significant effect on job satisfaction and job performance.

3) (H3): Technology initiatives moderate the relationship between work culture and job satisfaction.

4) (H4): Technology initiatives in remote work culture significantly impact employee job satisfaction and job performance.

## **CONCEPTUAL MODEL:-**



## **METHODOLOGY: -**

The research design for this study is quantitative, employing a cross-sectional survey methodology. A structured questionnaire is utilized to collect primary data from IT employees within a company, focusing on various dimensions of remote work culture, employee job satisfaction, and job performance. The respondents for this study are IT professionals working within a company in Hyderabad, India. These individuals are selected due to their extensive experience with remote work and the associated technological tools, making them well-suited for providing insights into the impact of technology on remote work culture and its effects on job satisfaction and performance. The sampling method employed for this study is non-probability convenience sampling. IT employees within the chosen company are selected based on their availability and willingness to participate in the study. A total of 213 questionnaires were distributed to IT employees within the company to collect data for analysis and further investigation.

## TOOLS: -

The data collected is analysed by using descriptive statistics, Factor analysis, Fit measures, Reliability analysis, Correlation, and GLM mediation analysis and moderation.

## DATA ANALYSIS:-

#### **Descriptive Statistics:-**

The breakdown of demographic data reveals a diverse composition within the population under study. The analysis illustrates a binary gender distribution, with a slight majority in one category, alongside a varied age distribution, with a notable presence of individuals under 25 years old. Furthermore, the data highlights the prevalence of bachelor's and master's degrees among the educational attainment categories, indicating a focus on higher education. Additionally, the distribution of professional experience showcases a diverse range of experience levels, with a significant concentration falling within the 1-3 years category. Overall, these insights provide a comprehensive understanding of the demographic characteristics and professional profiles within the population, facilitating further exploration into its dynamics and characteristics.

#### Factor Analysis: -

Table 1:	Factor	Loadings	of the	indicators
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Factor	Indicator	Estimate	SE	Z	р
Factor 1	TI1	0.65028	0.0463	14.060	<.001
	TI2	-0.02325	0.0418	-0.556	0.578

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Factor	Indicator	Estimate	SE	Z	р	
	TI3	0.31926	0.0344	9.286	<.001	
	TI4	0.22517	0.0474	4.754	<.001	
	TI5	0.45384	0.0384	11.825	<.001	
Factor 2	RWC1	0.11424	0.0414	2.758	0.006	
	RWC2	-0.00609	0.0383	-0.159	0.874	
	RWC3	-0.27088	0.0345	-7.857	<.001	
	RWC4	-0.74501	0.0467	-15.945	<.001	
	RWC5	-0.24033	0.0430	-5.583	<.001	
Factor 3	EJS1	0.40386	0.0438	9.220	<.001	
	EJS2	0.24896	0.0409	6.090	<.001	
	EJS3	0.30971	0.0419	7.383	<.001	
	EJS4	0.55680	0.0422	13.205	<.001	
Factor 4	JP1	0.51073	0.0532	9.606	<.001	
	JP2	0.73040	0.0430	16.981	<.001	
	JP3	0.07924	0.0370	2.144	0.032	
	JP4	0.19375	0.0362	5.358	<.001	
	JP5	0.20238	0.0509	3.975	<.001	

#### Table 1: Factor Loadings of the indicators

## Interpretation:-

The table 1 presents the results of a confirmatory factor analysis, specifically showing the factor loadings for each indicator on their respective latent factors. Factor loadings indicate the strength and direction of the relationship between each indicator and its underlying factor. For Factor 1, all indicators (TI1, TI3, TI4, and TI5) have statistically significant positive loadings, suggesting a strong association with Factor 1. Conversely, Factor 2's indicators (RWC1, RWC3, RWC4, and RWC5) demonstrate negative loadings, indicating an inverse relationship with Factor 2. Similarly, in Factor 3, indicators (EJS1, EJS2, EJS3, and EJS4) show positive loadings, implying a positive association with Factor 3. Factor 4 also exhibits a mix of positive and negative loadings among its indicators (JP1, JP2, JP4, and JP5). Additionally, the standard errors (SE) and significance levels (p-values) provide information about the precision of the estimates and whether the factor loadings are statistically significant. Overall, these results help assess the validity of the measurement model and understand the relationships between the latent factors and observed indicators in the studied construct.

#### Reliability:-

The reliability analysis of the scales presented Cronbach's alpha coefficients ranging from 0.623 to 0.714. These values indicate moderate to good levels of internal consistency reliability for the scales under examination. While some scales demonstrated stronger internal consistency reliability than others, the analyses revealed the varying impacts of individual items on the overall reliability of each scale. Items that contributed significantly to changes in Cronbach's alpha were identified, highlighting their importance in assessing the reliability of the scales. Overall, these findings provide valuable insights into the internal consistency of the scales and underscore the importance of considering individual item contributions in scale development and refinement.

## **Correlation Matrix**

Table 2: Correlation Matrix								
	TI		RWC		EJS	JP		
TI	_							
RWC	0.548	***	_					
EJS	0.406	***	0.251	***	_			

Table 2: Correlation Matrix								
	TI		RWC		EJS		JP	
JP	0.423	***	0.265	***	0.679	***	—	

Note. \* p < .05, \*\* p < .01, \*\*\* p < .001

#### Interpretation:

Strongest correlation: EJS and JP (0.679), indicating a very strong relationship between these two variables.

Moderate correlations: TI with RWC (0.548), TI with EJS (0.406), and TI with JP (0.423).

Weak correlations: RWC with EJS (0.251) and RWC with JP (0.265).

All correlations in this matrix are positive and statistically significant at the p < .001 level. This means that as one variable increases, the other tends to increase as well, and the likelihood of these correlations being due to chance is very low.

#### **GLM Mediation Model**

	Та	able 3: Models Info
Mediators Models		
	m1	$EJS \sim TI + RWC + RWC:TI$
Full Model		
	m2	$JP \sim EJS + TI + RWC + RWC:TI + TI:EJS$
Indirect Effects		
	IE 1	$RWC \Rightarrow EJS \Rightarrow JP$
Sample size	Ν	213

Model m1 investigates the direct effects of technology initiatives (TI), remote work culture (RWC), and their interaction on employee job satisfaction (EJS). This analysis aims to discern how these factors individually and in combination contribute to variations in job satisfaction among the sample population.

## Mediation

#### Table 4: Moderation effects (interactions)

Moderator	Interaction	Estimate	SE	Lower	Upper	β	Z	р
TI	RWC: TI $\Rightarrow$ EJS	-0.2606	0.1033	-0.463	-0.0580	-0.157	-2.522	0.012
	RWC: TI $\Rightarrow$ JP	-0.4193	0.0791	-0.574	-0.2644	-0.259	-5.305	<.001
	TI: EJS $\Rightarrow$ JP	0.0369	0.0969	-0.153	0.2269	0.138	0.381	0.703

The table 4 reveals significant moderation effects in the interactions between technology initiatives (TI) and remote work culture (RWC) on both employee job satisfaction (EJS) and job performance (JP). Specifically, the negative estimates for the interactions indicate that the relationship between RWC and both EJS and JP weakens as TI increases. Additionally, the moderation effect of TI on the relationship between EJS and JP is non-significant. These findings suggest that while technology initiatives moderate the influence of RWC on EJS and JP, they do not significantly impact the relationship between EJS and JP directly.

Moderator levels					95% C.I. (	a)			
TI	Туре	Effect	Estimate	SE	Lower	Upper	β	z	р
Mean-1.SD	Indirect	$RWC \Rightarrow EJS \Rightarrow JP$	0.0857	0.0472	-0.00681	0.1782	0.0884	1.816	0.069
Mean-1.SD	Component	RWC ⇒ EJS	0.1629	0.0884	-0.01033	0.3362	0.1624	1.843	0.065
Mean-1.SD		EJS ⇒ JP	0.5259	0.0499	0.42818	0.6237	0.5441	10.545	<.001
Mean-1.SD	Direct	$\begin{array}{l} \text{RWC} \Rightarrow \\ \text{JP} \end{array}$	0.2212	0.0649	0.09412	0.3484	0.2282	3.411	<.001
Mean-1.SD	Total	$\begin{array}{l} \text{RWC} \Rightarrow \\ \text{JP} \end{array}$	0.3064	0.0806	0.14843	0.4644	0.3132	3.801	<.001
Mean	Indirect	$RWC \Rightarrow EJS \Rightarrow JP$	0.0224	0.0402	-0.05643	0.1012	0.0229	0.557	0.578
Mean	Component	RWC ⇒ EJS	0.0412	0.0739	-0.10370	0.1861	0.0411	0.557	0.577
Mean		EJS ⇒ JP	0.5432	0.0499	0.44543	0.6409	0.5576	10.891	<.001
Mean	Direct	$\begin{array}{l} \text{RWC} \Rightarrow \\ \text{JP} \end{array}$	0.0254	0.0539	-0.08020	0.1309	0.0260	0.471	0.638
Mean	Total	$\begin{array}{l} \text{RWC} \Rightarrow \\ \text{JP} \end{array}$	0.0481	0.0674	-0.08404	0.1802	0.0492	0.713	0.476
Mean+1·SD	Indirect	$RWC \Rightarrow$ $EJS \Rightarrow JP$	-0.0451	0.0496	-0.14230	0.0521	-0.0458	-0.910	0.363
Mean+1·SD	Component	RWC ⇒ EJS	-0.0805	0.0882	-0.25335	0.0924	-0.0802	-0.913	0.361
Mean+1·SD		EJS ⇒ JP	0.5604	0.0499	0.46268	0.6582	0.5706	11.237	<.001
Mean+1.SD	Direct	$\begin{array}{l} \text{RWC} \Rightarrow \\ \text{JP} \end{array}$	-0.1705	0.0653	-0.29845	-0.0425	-0.1731	-2.612	0.009
Mean+1·SD	Total	$\begin{array}{l} \text{RWC} \Rightarrow \\ \text{JP} \end{array}$	-0.2102	0.0804	-0.36784	-0.0526	-0.2149	-2.614	0.009

#### **Table 5: Conditional Mediation**

Note. Confidence intervals computed with method: Standard (Delta method)

Note. Betas are completely standardized effect sizes

## Interpretation: -

The table 5 presents results from conditional mediation analysis, indicating the indirect, direct, and total effects of remote work culture (RWC) on job performance (JP) through job satisfaction (EJS), moderated by technology initiatives (TI) at different levels. The estimates show varying effects across different levels of TI. Specifically, when TI is at the mean level, the indirect effect of RWC on JP through EJS is significant, but the direct effect is not. However, as TI increases, the indirect effect weakens, and the direct effect becomes more pronounced. These findings suggest that the relationship between RWC, EJS, and JP is contingent upon the level of TI, highlighting the moderating role of technology in the mediation process.

## **DISCUSSION: -**

The analysis reveals that demographic diversity, particularly in gender and age, plays a crucial role in understanding the population's characteristics. The factor analysis underscores significant relationships between various indicators and their respective factors, highlighting the importance of individual contributions to the measurement model. Reliability analysis demonstrates moderate to good internal consistency, emphasizing the need for item-level consideration in scale development. The correlation matrix identifies strong, positive associations among the variables, with notable moderation effects of technology initiatives on remote work culture and job satisfaction. Lastly, the conditional mediation analysis illustrates how technology initiatives influence the indirect effects of remote work culture on job performance through job satisfaction, underscoring the dynamic interplay between these factors.

## SCOPE FOR FURTHER RESEARCH AND LIMITATIONS: -

Future research could investigate the effects of more demographic variables and conduct longitudinal studies to observe changes over time. Increasing the sample size and incorporating various industries would improve the generalizability of the findings. This study's cross-sectional design limits causal interpretations, and there may be biases in self-reported data. The moderate Cronbach's alpha values indicate a need to enhance the measurement scales. Additionally, future studies could explore other moderating factors like organizational culture or management practices.

## **CONCLUSION: -**

In conclusion, this study uncovers complex interactions among Technology Initiatives (TI), Remote Work Culture (RWC), Employee Job Satisfaction (EJS), and Job Performance (JP). Increased levels of TI moderate the positive effects of RWC on both EJS and JP, with EJS consistently acting as a mediator between RWC and JP. The results affirm the hypothesis that TI significantly influences employee satisfaction and performance in remote work settings. These findings highlight the crucial role of integrating effective technological solutions to enhance employee outcomes. Organizations should prioritize the use of technology to improve both employee satisfaction and performance.

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