



A DESCRIPTIVE STUDY ON THE ROLE OF CHANGE MANAGEMENT IN DIGITAL TRANSFORMATION

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Abstract

Background: Incorporating digital technology throughout a whole business or organisation may have far-reaching effects on efficiency and the quality of service provided to customers. This might involve implementing new digital tools & platforms, adjusting corporate operations & procedures, & creating new digital goods & services.

Method: The research used a survey research design, & data was collected from 125 respondents working in organizations that have undergone a digital transformation (DT) process.

Conclusion: The study's conclusions demonstrate that change management is essential to the accomplishment of projects related to DT. Digital transformation initiatives are successful in part due to the adoption of change management practices such as effective project management & governance, clear communication of the change, participation of stakeholders in the change process, adequate training & support for employees, strong leadership & sponsorship, & use of data & metrics to measure progress & success.

Keywords: Change Management, Digital Transformation, Integration of Digital Technology

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1.0 Introduction

According to Bharadwaj et al. (2013) & practitioners, DT has become a significant phenomenon. Digital technologies are altering how industrial organizations run, which is guiding businesses into a new era of industrialization (Parida et al., 2019). Due to the introduction of various digital technologies, firms have been compelled to change the value generation pathways they previously relied on in order to remain competitive (Vial, 2019). Industrial Internet of Things (IIoT) along with cloud computing, cutting-edge algorithms, & also artificial intelligence, hyperconnectivity, self-learning systems, as well as automation, along with big data, & also analytics are only a few examples of the digital technologies mentioned (Gilchrist, 2016).

The adoption of new technology, as well as the deployment of new procedures & workflows, constitutes components of DT, which entails a fundamental shift in how an organization functions. To achieve a successful & seamless shift to digital technology, change management is crucial. Organizations may prepare for & manage the effects of change on their workers, clients, & other stakeholders with the aid of change management. To assist people, understanding why the change is required, how it will affect them, & what they need to do to adjust to the new way of working, requires communication, training, & support is important. Digital transformation projects are likely to fail if change management is ineffective because individuals may reject the change or not fully appreciate its advantages. The study is stuffed with some variables, such as the level of awareness, adoption of digital technology, change management strategies, resistance to change, change management framework communication strategies, change champions, training & development, leadership style, minimizing disruptions, level of employees, speed of adoptions with innovation & feedback.

Effective change management for DT entails many crucial processes,

The most important details in this text are the steps needed to successfully manage DT. These steps include creating a clear vision & plan for the transition, evaluating the present situation & pinpointing any gaps, creating a roadmap for the transformation, including stakeholders & conveying the vision, creating & implementing training & assistance programs, tracking progress & making necessary adjustments depending on input & outcomes, & tracking progress & making

necessary adjustments depending on input & outcomes. It is important to have the cooperation of all parties involved, including partners, customers, & workers, & to create & implement training & assistance programs tailored to the needs of the various stakeholder groups. Robu, D., & Lazar, J. B. (2021).

2.0 Review of Literature

By synthesizing & analysing a review of the literature, this study seeks to provide a foundation for further investigation & offer valuable insights for organizations embarking on DT journeys.

The 2017 research by Singh & Hess (2017) research highlights the importance of a clear digital strategy, change management, & relationship development for effective DT programs. CDOs are responsible for creating a digital strategy, implementing change management programs, & bridging the gap between business & IT. They employ tactics such as forming alliances, fostering a digital culture, & having a clear digital strategy to overcome problems like opposition to change, a lack of resources, & unclear goals.

The writers offer insightful information about the difficulties CDOs encounter & the methods they employ to deal with those difficulties. The paper also emphasizes the value of change management, a crucial but sometimes disregarded component of DT programs.

Bellantuono et al. (2021) make a significant contribution to the body of knowledge on DT models & change management techniques. The research emphasizes the importance of incorporating change management techniques into DT projects & offers insight into applying the I4.0 paradigm in the industrial sector. The authors used a systematic examination of the literature to find pertinent publications, which they then examined to find models of DT & the change management techniques that go along with them. Digital transformation programs' success depends on the integration of change management methods, & the authors offer insightful explanations of the main components of the I4.0 paradigm, such as the use of data analytics & the integration of cyber-physical systems, & how they may be successfully implemented using change management techniques.

Vey, K. et al. (2017) explore the importance of learning & development in fostering a culture of change & creativity during the digital transition.

They discuss the difficulties businesses have when putting such programs into practice, as well as recommendations for how to deal with them. & further emphasizes the need for businesses to cultivate a culture of change & creativity in order to successfully implement programs for DT.

Objectives of the Study

- To evaluate the impact of change management on the success of DT initiatives
- To explore the level of implementation of change management in DT

3.0 Methodology

This research aims to evaluate the impact of change management on DT initiatives' success & explore the level of implementation of change management in DT. A comprehensive review of relevant literature was conducted to identify current trends & best practices in change management & DT. The study employed a survey research design, & the data was collected from

125 respondents working in organizations that have undergone a DT process in Delhi-NCR. The survey questions were designed to obtain information on the extent of change management implementation, the effectiveness of training & support programs, the communication of DT goals to stakeholders, & the monitoring of progress & adjustment of the roadmap. The acquired data was evaluated utilising sophisticated SPSS along with additional statistical methods, like the standard deviation and mean.

4.0 Data Analysis

4.1 Reliability & Factor Analysis

4.1.1 Change in Management

The great dependability of this measurement tool is shown by a Cronbach alpha score of .930 for the 'change in management' scale. In addition, it pointed to a high degree of internal consistency within the given sample.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.930	.929	20

Table 4.1: - reliability statistics

From the table, we concluded that descriptive statistics explained the mean, standard deviation,

& the number of individual questions of change in management.

Item Statistics			
	Mean	Std. Deviation	N
Q_MC_01	3.4640	1.52688	125
Q_MC_02	3.1280	1.25065	125
Q_MC_03	3.5920	1.40905	125
Q_MC_04	3.8080	1.24884	125
Q_MC_05	3.7200	1.20215	125
Q_MC_06	3.6480	1.11627	125
Q_MC_07	3.6880	1.29151	125
Q_MC_08	3.5360	1.34130	125
Q_MC_09	3.8160	1.21406	125
Q_MC_10	3.7600	1.06559	125
Q_MC_11	3.6960	1.23278	125
Q_MC_12	3.3760	1.37174	125
Q_MC_13	3.4880	1.37146	125
Q_MC_14	4.0080	1.00399	125
Q_MC_15	3.7520	1.15463	125
Q_MC_16	3.6240	1.19585	125
Q_MC_17	3.7520	1.31159	125
Q_MC_18	3.7200	1.27381	125
Q_MC_19	3.5920	1.28951	125
Q_MC_20	3.8160	1.20070	125

Table 4.2: - items statistics

If the KMO score is below .50, it's not sufficient; ideally, it should be over .70. By using the KMO

test, we can see whether there are sufficient items predicted by each component. In this case, we get

a decent result of .889. For 'change in management' to be a valid foundation for factor analysis; also, the Bartlett test must provide a significant result (a significance level of less than .05). Further, this table reveals that all the

variables are highly correlated with each other & change management shows a very well-defined role in the adoption of DT.

KMO & Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.889
Bartlett's Test of Sphericity	Approx. Chi-Square	1373.142
	df	190
	Sig.	.000

Table 4.3: - KMO & Bartlett's Test

Before rotation, the relationship across the variable and all other variables is represented by these initial communalities (the squared multiple correlations across the item and all other items). The communalities reveal the proportion of variation (communality value; must be above 0.5

for consideration). Unless remaining variables can be explained by the retrieved factors, they should be omitted from additional factor analysis procedures. There were two variables which had less than 0.5 extraction values.

Communalities		
	Initial	Extraction
Q_MC_01	1.000	.681
Q_MC_02	1.000	.639
Q_MC_03	1.000	.569
Q_MC_04	1.000	.477
Q_MC_05	1.000	.510
Q_MC_06	1.000	.623
Q_MC_07	1.000	.713
Q_MC_08	1.000	.660
Q_MC_09	1.000	.500
Q_MC_10	1.000	.615
Q_MC_11	1.000	.548
Q_MC_12	1.000	.566
Q_MC_13	1.000	.550
Q_MC_14	1.000	.612
Q_MC_15	1.000	.647
Q_MC_16	1.000	.513
Q_MC_17	1.000	.559
Q_MC_18	1.000	.699
Q_MC_19	1.000	.507
Q_MC_20	1.000	.454
Extraction Method: Principal Component Analysis.		

Table 4.4: - Communalities

The table labelled "Total Variance Explained" displays the breakdown of the variation among the various explanations. As a typical criteria for a factor's usefulness, note that three of them have eigenvalues (a gauge of explained variance) over 1.0. When the factor's eigenvalue is below one, it

has less explanatory power than the original item did. The amount of factors retrieved needs to be equivalent to the total number of items in the factor analysis, which is reflected in the eigenvalue.

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.675	43.377	43.377	8.675	43.377	43.377
2	1.682	8.412	51.789	1.682	8.412	51.789
3	1.285	6.427	58.217	1.285	6.427	58.217
4	.970	4.849	63.065			
5	.934	4.670	67.735			
6	.848	4.241	71.976			
7	.797	3.984	75.961			
8	.746	3.729	79.690			
9	.629	3.143	82.833			
10	.499	2.494	85.328			
11	.435	2.176	87.504			
12	.417	2.087	89.591			
13	.357	1.783	91.374			
14	.338	1.691	93.065			
15	.317	1.583	94.648			
16	.270	1.350	95.998			
17	.258	1.289	97.287			
18	.194	.971	98.257			
19	.187	.936	99.193			
20	.161	.807	100.000			

Extraction Method: Principal Component Analysis.

Table 4.4: - Total Variance Explained

Rotating the variables helps lessen the number of elements on which they have heavy loadings. Although the analysis remains same, it may be better understood after being rotated. Component

1 had 19 variables with a correlation value of more than 0.5; similarly, component 2 had one variable with a correlation value of more than 0.5.

Rotated Component Matrix			
	Component		
	1	2	3
Q_MC_01	.824		
Q_MC_02	.790		
Q_MC_03	.752		
Q_MC_18	.745		.349
Q_MC_12	.732		
Q_MC_07	.711	-.433	
Q_MC_13	.703		
Q_MC_16	.697		
Q_MC_17	.671	-.331	
Q_MC_19	.657		
Q_MC_11	.652		
Q_MC_04	.646		
Q_MC_06	.641		-.456
Q_MC_08	.637	-.453	
Q_MC_05	.607		-.325
Q_MC_15	.585	.540	
Q_MC_20	.558		-.302
Q_MC_10	.517	.423	.410
Q_MC_09	.502		.494
Q_MC_14	.382	.682	

Extraction Method: Principal Component Analysis.
a. 3 components extracted.

Table 4.5: - Rotated Component Matrix

Discussion

In the context of the study on the role of change management in DT, several statistical analyses were conducted to assess the reliability & factor structure of the measurement instrument used. The reliability evaluation revealed a high internal consistency level, along with a Cronbach's alpha coeff. of .930 for the concept of "change in management." This indicates that the measuring instrument used to assess this concept was reliable & produced consistent results within the specific sample. The descriptive statistics provided insights into the individual questions related to the change in management. The mean & standard deviation values reflected the average response & the extent of variation among the participants' perceptions of this concept. Predictive power was adequate for all factors KMO test of sample adequacy. Bartlett's sphericity test was also statistically significant, indicating that there was sufficient correlation between the variables to do a factor analysis. The communalities indicated how much variance in the variables was accounted for by the extracted factors. Most variables had extraction values above 0.5, indicating a satisfactory level of shared variance. However, two variables had extraction values below 0.5 & may need to be further evaluated or potentially removed from further analysis. The total variance explained table showed that three factors had eigenvalues greater than 1.0, indicating their usefulness in explaining the variation in the data. The extracted factors accounted for a cumulative percentage of variance, reflecting the amount of information explained by each factor.

The rotated component matrix provided insights into the correlation between the variables & the extracted factors. The loadings of variables on each factor helped to identify the underlying dimensions related to change management in DT.

Conclusion

In conclusion, the statistical analyses supported the reliability & factor structure of the measurement instrument used to assess change management in DT. The findings contribute to a better understanding of the role of change management in the context of organizational efforts to undergo DT. All the variables are greatly correlated with one another, which shows that change management is a very vital factor in the adoption of digital technology. Digital transformation is a very essential parameter in today's scenario where change management with

all the variables accomplished the DT. In conclusion, the study stresses the importance of change management practices & the need for organizations to prioritize & invest in them during DT. Achieving success in digital initiatives requires navigating the challenges associated with DT, increasing employee performance & job satisfaction, & implementing effective change management processes.

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