



A Quantitative Study on Leadership Style of Teams in Virtual Work Environment of Private Sector in India

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Abstract

The forward-thinking leader in the digital era embraces technology as a tool to prioritize sustainability in the competitive environment of business. The need to do business in a same time at different place gives rise to the concept of virtual leadership. Virtual Leadership and its relation with the virtual workforce is a reality test in the pandemic hit Global platform. Virtual Leadership is a management approach that is poles apart from the traditional environment of business and is dependent on information and communication technology. Virtual leadership is instrumental to financial success of many companies having remote and hybrid work cultures in the dynamic and multidimensional work environment. The fast pace of advancement of business have mandated the changes in the organisational system and structures and have made business more adaptable, sustainable and flexible. The culture of shared workspace is cost-effective for start-ups in the competitive edge due to the advancement of technology. It is a challenge to develop an effective approach to managing virtual workplaces using proven strategies to leading virtual teams. This study targets to find out the leadership style of the team members operating in virtual platform to identify the future virtual leaders. A sample of primary data of 244 respondents has been utilised, wherein employees of private sector working in virtual platform has been considered. A questionnaire has been administered to conduct the study and likert scale has been used to rate the attitude of the respondents. The data analysis has been done by applying suitable statistics. The result professed existence of high transformational style of leadership and moderate transactional style of leadership among the team members in virtual platform.

Keywords: *Virtual Leadership, e-leaders, Virtual Teams, Leadership Style*

Introduction

The concept of working style in virtual mode is not innovative but in India, the mode of virtual working became progressive since outbreak of COVID pandemic. Through communication technology this style of working has been practiced previously in different countries and extensive research has also been done on this topic but in India the virtual mode of work is in practise in some organisations and has not been extensively used. The mode of work in virtual style is not accepted graciously in the industries where physical presence is mandatory but those positions which do not demand bodily presence is being dedicated to the teams to work virtually. The present day business has turned much more competitive after globalisation and teams needs to connect from different places at the same time which is much more conveniently possible though technology and face-to-face interaction is not essential. The virtual working is widely accepted by the employees of the private sector as there is no work time barrier and has the advance to prioritise social and personal life. It also helps in striking a balance between work and personal life very easily.

Literature Review

With the rapid advancement of technology the private sector organisation are generating sweeping changes and the effects are far-reaching. Along with increasing changes, the organisations have inflated their expectations of performance from their employees to become self-managing as well self-regulating (Bassi, 1998; Lawler, 1994; Locke & Latham, 1994). It is also indicated by Boyett & Conn in 1992 that the expectations of performance by the organisations are rising higher. According to Kegan (1994) to beat the increased demands of the employers it became essential for the employees to be more proactive in the workplace than before. Due

to the advent of information technology, the services related businesses have expanded around the globe. The ulterior changes inspired the organizations to coordinate across the physical boundaries and initiate business in different time zones and organizational context. On the basis of such demands, the organisation are taking the advantage of progressing technology and the face to face conventional teams have started converting themselves into virtual teams.

It was further noted that some factors which may influence the non-positive features among the virtual team members which are diverse culture, different time-zones, globally scattered team members, locational distance among the team members and specifically the tremendous reliance on technology and computers as indicated by Jarvenpaa in 1998. Virtual teams face a lot of challenging situations which initiates from trust, communication and team co-ordination as stated by the predecessor researchers Kitchen & McDougall in 2014 and Jarvenpaa in 1998. The alliance that occurs within the team members of a virtual team as effective communication and information diffusion across time and space was clarified by Lilian in 2014. Hambley et al. in 2007 considered their study concentrating on virtual teams that interconnect among themselves exclusively through the medium of technological and excluding occasional face-to-face contact. Vierebl in 2022 informed the occurrence of informal meetings between colleagues in a virtual mode during the beginning of the COVID pandemic. A wide range of popular leadership theories and styles are defined in the literature. One of the most prevalent validated theories is the Model of Leadership of Bass & Avolio (1994). Bass and Avolio in 2004 used a questionnaire which is intended to identify the characteristics of a transformational leader. The study of insisted in self measurement of individuals from their own perception and also enabled the measurement of the individuals from the perceptions of their peers and superiors. Additionally, Bell & Kozlowski in 2002 stated that there has been significant increase in the business working environment of using virtual teams which is an opportunity in real time for the organisations irrespective of their presence in the world to connect and unify substantial expertise and the same was also confirmed by the views expressed in 2012 by Kirkman, Gibson, and Kim. The importance of virtual association among virtual team members was also highlighted by Hill et al. in 2016. The members of the virtual association performed their task mostly through the virtual channels as reiterated by Liao in 2017. Morison-Smith & Ruiz in 2020 spoke of the collaboration in virtual teams and mentioned it to be interactions and tasks were performed to achieve common organisational goals.

Problem Statement

Our predecessors have conducted extensive researches but not much research has been conducted in India on leadership in virtual mode of work. Further, it can be deduced from the past researches that there is a lacuna to connect the leadership style with the employee need of the organisation leading to decline in motivation and deterioration in productivity. Hence the focus of this research is particularly to study the leadership style of the members of the team operating in virtual platform and understand their best fit in the business acumen to balance the team dynamics. Furthermore, the objective of the research is also to identify the significant parameters of leadership style of members of the virtual teams.

Research Methodology

The research has been conducted considering the employees of private sector industries wherein primary data of 244 respondents has been utilized. After a detailed review of the work of the antecedents, Questionnaire on Leadership Style along with Demographics Questionnaire has been administered for collection of primary data to analyse in details the factors having impact on virtual teams.

Data Analysis

The data analysis has been done by applying suitable statistics like Reliability Test and Factor Analysis. SPSS Statistics 26 (Statistical Package for Social Science) has been used for the purpose of data analysis. To explore the impact of different factors a number of 250 respondents have been interviewed out of which data of 244 respondents were acceptable. A battery of statistical tests has been conducted to measure the association among the variables.

Cronbach's Alpha Reliability Test has been conducted in the Leadership Questionnaire. 21 factors have been considered in respect to leadership style of Virtual Teams.

Table 1: Reliability Table

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.894	.898	21

The Cronbach's alpha test of reliability has been conducted to test the reliability of the data of Virtual Teams and it is found that the Cronbach's Alpha in the present data set is 0.894 and hence the data set is well acceptable and reliable.

The objective of the study focuses to identify the leadership style of the virtual teams so Factor Analysis has been conducted.

Table 2: KMO and Bartlett's Table

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.820
Bartlett's Test of Sphericity	Approx. Chi-Square	2463.625
	Df	210
	Sig.	.000

The Kaiser-Meyer-Olkin test (Table 2) was performed to test the sampling adequacy where KMO is equal to 0.820 which is greater than 0.5 and hence the sample size is considered to be sufficient. The Kaiser-Meyer-Olkin test was conducted to identify presence of adequate number of correlations between the variables and significance value herein is 0.000 which is much less than the alpha value that is 0.05 and hence enough correlations for factor analysis is present in the dataset.

The Total Variance Explained Table (Table 3) shows that the 5 factors together account for 63.611 % of the total variance in the cumulative percentage column.

Table 3: Total Variance Explained Table

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.065	33.642	33.642	7.065	33.642	33.642	3.906	18.599	18.599
2	2.137	10.177	43.819	2.137	10.177	43.819	3.086	14.694	33.293
3	1.685	8.023	51.842	1.685	8.023	51.842	2.435	11.593	44.886
4	1.352	6.438	58.279	1.352	6.438	58.279	2.132	10.153	55.039
5	1.120	5.331	63.611	1.120	5.331	63.611	1.800	8.572	63.611
6	.992	4.723	68.334						
7	.913	4.350	72.684						
8	.829	3.950	76.634						
9	.710	3.381	80.014						
10	.597	2.845	82.859						
11	.513	2.441	85.300						
12	.467	2.226	87.526						
13	.433	2.064	89.590						
14	.402	1.914	91.504						
15	.372	1.772	93.276						
16	.308	1.468	94.745						
17	.279	1.331	96.075						
18	.261	1.244	97.319						
19	.202	.961	98.280						
20	.187	.893	99.173						
21	.174	.827	100.000						

Extraction Method: Principal Component Analysis.

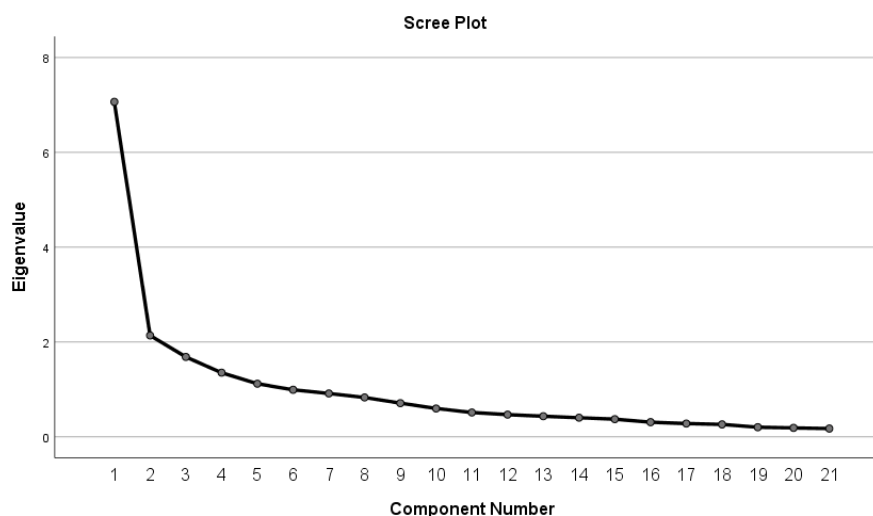


Figure 1: Screen Plot

It is clear from the screen plot graph (Figure 1) that five factors are above the Eigenvalue of 1 and the rest sixteen factors are below the Eigenvalue of 1. Hence it is evident from the scree plot that the extracted factors in the factor analysis to be five. The Table of Communalities expresses the proportion of variance reached variables that can be explained by the factors and all of the extractions are above 0.5 and can be considered to be very good.

Rotated Component Matrix clearly illustrates the strong factor loadings, herein the highest factor loading is 0.782 and the lowest factor loading is 0.263. Varimax has been used for rotation. Out of the 21 factors demarcated as parameters of leadership styles can be segregated into 5 latent types. The five latent types of leadership style may be nomenclature as Dedicated Trustworthy, Motivated Enthusiastic, Innovative Thinker, Encouraged Attentive, and Focused Rewarder.

Table 4: Communalities Table

Communalities			
	Virtual Team	Team Member	Team Leader
Extraction			
Factor 1	0.615	0.613	0.805
	0.681	0.741	0.641
	0.614	0.652	0.722
Factor 2	0.746	0.794	0.701
	0.51	0.647	0.843
	0.716	0.759	0.681
Factor 3	0.669	0.783	0.697
	0.584	0.856	0.747
	0.581	0.622	0.648
Factor 4	0.531	0.555	0.648
	0.733	0.743	0.761
	0.666	0.664	0.729
Factor 5	0.615	0.699	0.664
	0.752	0.786	0.756
	0.528	0.662	0.636
Factor 6	0.464	0.496	0.706
	0.8	0.786	0.865
	0.59	0.695	0.702
Factor 7	0.674	0.719	0.674
	0.605	0.646	0.584
	0.685	0.704	0.699

Furthermore, for a detailed introspection, extraction has been compared between the team members and team leaders which clearly clarify that influence of factors Idealised Influence (Factor 1), Inspirational Motivation (Factor 2), Individualised consideration (Factor 4) and Management-by-exception (Factor 6) are more among the team leaders and influence of factors Intellectual Stimulation (Factor 3), Contingent reward (Factor 5), and Laissez-faire (Factor 7) are higher among the team members. It can be deduced that the team leaders are more trustworthy, self-reliant, self-motivated, dedicated and focused towards their goal accomplishment.

Results & Findings

The use of ICT tools such as computers, printers, e-mail services, word processors, spreadsheets and presentation softwares are daily essentials of the members of the virtual teams. The knowledge of technology for communication is a major requisite for the team communication through virtual modes. On detailed analysis, it is observed that respondents mostly fall within the age group of 21 years to 40 years. So it can be considered that virtual teams are the new generation workers who are more competent to work in virtual network. The response received highlights that the teams in virtual mode of work are faithful towards their members and are trustworthy. They are more inclined to respect each other and are co-operative in nature. The team members are very active in inspiring the team to perform and are very supportive for better performance. The members in virtual platform are highly motivated for achievement of goals of their team members which highlights that the teams communicate energetically with a shared vision and are dedicated towards their team achievement in unison. Team members are concerned for the welfare of their team mates. The comparison between the virtual team members and team leaders gives a glimpse of the fact that the team leaders are more dependable, motivated, self-sufficient, enthusiastic, committed and focused towards their own performance as well as their team performance than the team members. The team members are innovative, creative and are more tolerant to extreme situations and are highly influenced by rewards and acknowledgment for their achievements. They take initiatives to guide other members of the team to achieve their targeted goals to get rewarded. High Transformational Style of Leadership and moderate Transactional Style of Leadership is professed. It has been perceived that a virtual leader should be trust-worthy, reliable and a good coordinator.

The responses received from the virtual teams helps to draw a concept about the necessities of the virtual team members working in different location and connected through technology. It has been perceived that the teams working in virtual mode are mostly in their 30s and are mostly self-dependent and self-motivated and prompt decision makers.

Conclusion

It is noteworthy that despite leadership has long been acknowledged as critical in virtual platform but it can be noticed that not much studies have intensively worked on the problems faced in virtual leadership. The entire processes of work are driven by technology and are extremely dependent on computers and connectivity. It is important to enumerate and enlighten the styles of the leaders working in this mode of and is achieving higher performance. The uplift change in business has paved the way to a virtually lead team where the performance accomplishment for the leader as well as the team member is a challenge to overcome. The virtual work arrangements are highly advantageous for the organisations sustainability where the organisation do not need to maintain an office for the entire workforce which provides the organisation with better growth prospects. The concept of virtual workplace has arisen along with the concept of arrangement of virtual teams where bodily presence is not a requirement. The team members also get the opportunity to strike a better balance among their work and person life which paves the way to a better wellbeing of the team members. The members of virtual team are free from the traditional working hours and have the opportunity to prioritise their family life.

Limitation & Future Scope

The study focuses on the future directions in terms of sample size of around five hundred for a better clarity. It is further essential to conduct more statistical tests for analysis of various factors in the virtual platform and understand their impact in the virtual platform to forecast the traits of a successful virtual leader which will help the organisations in selection of their team members and team leaders for the enhancement of business in future.

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