



EFFECT OF VIRTUAL WORK ENVIRONMENT ON WORKLOAD FACTORS AND ITS COMPLEXITY AT IT TECHNOLOGIES PVT. LIMITED

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Abstract

Modern problems require not only modern solutions but future solutions, so as it is necessary and in a broader way affecting the daily work life of many people; the virtual environment is interacting with computing environments and other people via networks. As it is totally different from live environments that is real, it sure does have some and many implications, as in the project I have gone through the well study of workload implication from the virtual environment, and I hope since virtual environment is our future researching on it was a tremendous job. Finding the ways to our modern problems which is going to become the solutions to future was so interesting and challenging, as I did my project on this interesting topic, it gave me opportunity to dig deep and know about then coming challenges. As the future is evolving technological changes so to find the changes to the technology, we must be ready. The study is taken in IT firm with 100 as respondent and compared both the factors through the help of Correlation and Regression

Introduction

A virtual work environment or a virtual workplace is a workplace which exists digitally. It does not have a physical presence. It is created and maintained with the help of the internet. The members of a virtual work environment, i.e., remote employees use a variety of technology-enabled tools to connect, collaborate and get work done. They may not meet in person regularly but carries out work through virtual networks and workspaces. Since it is virtually connected, a virtual work environment limited by time zones, physical space, or resource availability. It is possible to scale up and downscale resources for projects as and when required. As a result, virtual work environments provide small and big enterprises the much-needed flexibility to manage their regular requirements. Virtual work environments are considered to be the future of work. It will bring together diverse professionals together with the power of the internet. Communication and collaboration will flourish as a result of which there will be more productivity at lowers cost.

Virtual Workplace Climate

A virtual climate is an organized application which permits both the machine and PC climate and crafted by different clients. Email, visit, online applications and others are the instances of virtual workplace. It is generally worked arranged space Employees and the executives are associated through a private organization or the web and connect with one another by means of telephone, Skype, distributed computing programs and an entire host of other virtual choices.

Factors

- **Sensory:** Tangible incorporates tactile information (visual, aural, haptic, and soon) just as impression of those upgrades. Addressed through tangible equipment and programming that causes the sensations.
- **Cognitive:** Psychological Mental commitment with an encounter, like expecting results and tackling secrets. Can be deciphered as assignment commitment.
- **Affective:** Full of feeling Refers to the client's passionate state. Identified with how much an individual's feelings in the re-enacted climate would precisely impersonate his passionate state in a comparative true



circumstance.

- **Active:** Dynamic Relates to the level of individual association an individual feels to an encounter. Related with the level of sympathy, distinguishing proof and individual connection an individual feels to the virtual climate's symbols, environmental factors, and situation.
- **Relational:** Social Comprised of the social parts of an encounter. Operationalized as co-experience, making and building up significance through cooperative encounters.

Workload Factors

Workload Factors relating to the way in which work is organized are factors associated with how work and work tasks are planned, distributed, and managed in the workplace. Target to be achieved: A target is an action which should be undertaken in order to achieve a desired objective. Working Constraints: Working Constraints alludes to the work space and parts of a worker's agreements of business. Work Standards: It is a written description of how a process should be done. It guides consistent execution. At a minimum, it provides a base line from which a better approach can be developed

Literature Review

Shubhi Gupta and Govind Swaroop Patha (2017) The significant commitment of this examination is that it mulled over of different givers and abilities needed to turn into a fruitful virtual cooperative person. The difficulties looked by the groups have been advised. **Ramayah T(2018)** Primary model assessment was performed to test the hypotheses in the wake of changing the data steadfastness and authenticity. The results showed that an immense and positive relationship exists between correspondence, relationship building, association and trust towards bunch execution and no enormous association among coordination and grant towards bunch execution was found. **PauJordan (2017)** The pioneers physical and conduct changes have huge impact on the confidence in the pioneer as examined by model of conditions, established out that the outcomes support the speculation and the significance of confidence in pioneer as this trust brings about more prominent hierarchical effectiveness.

Charles Dennis (2010) The outcomes presumed that the significant job of tele presence segments in mimicked insight and the basic part of that experience, alongside gluttonous and utilitarian qualities, in commitment. Buy expectation is impacted by fulfillment, which is thus affected by pleasure, and commitment this thus is affected by the made out of controlled things utilitarian and indulgent worth and the experience of item recreation or tele presence which prompts prompting more noteworthy buy aim. The vivid, 3Dclimate, subsequently, can possibly match conventional shopping as far as experience, bringing about higher deals for retailers and fulfillment for buyers. **Shubhi Gupta (2018)** the foremost contribution of the study is that it has considered the various motivators and the skills required to be a successful virtual team player. Significant challenges encountered in virtual team's have also been identified. **Paola Spangle (2017)** Results put out that the work feebleness is not clearly related to workspace bothering; huge level of duty is related to workplace torturing; the risk for workplace bugging is improved by the cooperation between high obligation and occupation short coming. Right when the level of occupation vulnerability is high there is a more grounded association among obligation and torturing, appeared differently in relation to when the level of occupation unsteadiness is low.

Research Design

Statement of the Problem

Virtual Work Environment and workload Factors are two attributes that are dependent on each other. It is that the Virtual Work Environment is stressful and how it affects the Workload Factors and vice versa. The main aim of the project is to understand on Virtual Work Environment and the Workload.

Objectives

1. To study the relationship between virtual work environment and work load factors and its complexity.
2. To examine impact of virtual work environment on work load factors and its complexity.



Research Methodology

The population of the study is the employees of Software Company and survey research design was used for this study. The survey was isolated into two sections; the initial segment was intended to catch the Demographic Responses. Segment Characteristics of the representatives were sorted as: Personal Attributes, Age, Gender, Education, Marital status, Experience in the organization, The second part of the questionnaire consisted of 30 questions framed on the basis of Independent Variables and Dependent Variable.

Types of Research

It is a quantitative exploration technique that is considered definitive and is utilized to test explicit theory and depict attributes or capacities. Descriptive research design helps in providing answer to questions of who, what, when, how associated with are search problem. This study is conducted using descriptive research to describe the information regarding the target population, sampling technique is Purposive sampling. Sampling frame is Employees of the company, sampling size: 100 Respondents, data collection tool is Questionnaire. Statistical tools use are Correlation, Regression, data source are primary data is directly from the respondents using the questionnaire, secondary data in this data is collected using internet and website. Data for this study is collected through a survey of 30 questionnaires that was distributed to the employees of IT Technology firm. The elements of independent variable to this study will be Sensory, Relational, Affective, Active, and Cognitive. The elements of dependent variable to this study will be Target to be achieved, Work conditions, Work standards. Respondents were approached to rate their degree of concession to a five-point Likert scale, where represents “strongly agree” followed by “Agree”, “Neutral”, “Disagree” and “strongly Disagree”.

Hypothesis

H1: There is significant relationship between virtual work environment and work load factors and its complexity.

H2: There is a significant relationship impact between virtual work environment and work load factors and its complexity.

Data Analysis and Interpretation

By the collected data it states that the respondent are of different age group where 42% of them are below 25 years of age, 28% of them come in the range of 26-35 years, 30% of them come in the range of 36-45 and 50% of them are above 45 years of age. The collected data 44% responses are from the male employees and 56% responses are from the female employees working in IT firm Company. There are 44 % respondent's have under 2 years of involvement, 25 % respondents have 2-5 years of involvement and 31% respondents have over 5 years of involvement.

Reliability Statistics

Reliability analysis is basically done to measure the internal consistency between the questions in a scale of data, where the Cronbach's Alpha should be more than 0.7. Since the Cronbach Alpha is 0.884 in the study, therefore this data is suitable for further study or analysis.

Correlation

Correlation test is done to check whether there is significant relationship between the dependent and independent variables, significant value is 0.001 which is less than 0.05, which indicates that the above table we can say that there is significant relationship between Virtual Work Environment and Workload Factors. We accept the null hypothesis. Therefore, first objective has been proved that there is significant relationship between Virtual Work Environment and Workload Factors. Correlation test is done to check whether there is huge connection between the reliant and free factors, significant value is 0.001 which is under 0.05, which demonstrates that the above table we can say that there is critical connection between Virtual Work Environment and Work load Factors. We acknowledge the alternative hypothesis. In this manner; first target has been demonstrated that there is huge connection between Virtual Work Environment and Workload Factors.



		VWE_MEAN	WL_MEAN
VWE_MEAN	Pearson Correlation	1	.676**
	Sig. (2-tailed)		0
	N	100	100
WL_MEAN	Pearson Correlation	.676**	1
	Sig. (2-tailed)	0	
	N	100	100

Table No. 8

Correlation between Workload Factors and all the Factors of Virtual Work Environment

		WL_MEAN	VWE_S_MEAN	VWE_R_MEAN
WL_MEAN	Pearson Correlation	1	.418**	.537**
	Sig. (2-tailed)		0	0
	N	100	100	100
VWE_S_MEAN	Pearson Correlation	.418**	1	.400*
	Sig. (2-tailed)	0		0
	N	100	100	100
VWE_R_MEAN	Pearson Correlation	.537**	.400*	1
	Sig. (2-tailed)	0	0	
	N	100	100	100
VWE_AF_MEAN	Pearson Correlation	.466**	.315**	.392**
	Sig. (2-tailed)	0	0.001	0
	N	100	100	100
	Pearson			



	Correlation	.466**	.456**	.388**
VWE-	Sig. (2-			
AC_MEAN	tailed)	0	0	0
	N	100	100	100
	Pearson			
	Correlation	.612**	.443**	.511**
	Sig. (2-			
VWE_C_MEAN	tailed)	0	0	0
	N	100	100	100

By the collected data from the IT Technologies Pvt. Ltd, it states that the correlation between independent variable factors and dependent variable. From the analysis we can say that there is a significant relationship between independent variable factors and the dependent variable. Where the correlation of all the variables are above 0.3 it is moderate correlation

Regression Model Summary

	R	Adjusted R	Std. Error of the
Model	R	Square	Estimate
1	.676 ^a	0.456	0.43696

a. Predictors:(Constant), VWEMEAN

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	15.71	1	15.71	82.275	.000 ^b
1	Residual	18.712	98	0.191		
	Total	34.421	99			

a. Dependent Variables: WLMEAN b. Predictors: (Constant),VWE_MEAN

From the collected data from Hebron Company, it states the impact of independent variable on the dependent variable. The R² where in R refer to correlation. Adjusted R square will try to avoid error in the R square and it will calculate the adjusted R square. There should not be much gap between R square and adjusted R square. Anova states about the significant impact of variable. It should be less than 0.05. Then we can say that there is a significant impact on the variable. Therefore, there is a significant impact of employee welfare on the labour efficiency and the impact is 15.5%. The Coefficient **table** states that if we increase lunitofemployeewelfare that will impact 0.347 times labour efficiency and the significance is also less than0.05



Factors Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.729	0.319		2.289	0.024
1 VWE_MEAN	0.824	0.091	0.676	9.071	0

Table No. 12

a. Dependent Variable: WLMEAN

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.717 ^a	0.514	0.488	0.42201

c. Dependent Variables: WLMEAN

d. Predictors:

(Constant),VWE_C_MEAN,VWE_AF_MEAN,VWE_AC_MEAN,VWE_S_MEAN,VWE_R_MEAN,

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	17.681	5	3.536	19.856	.000 ^b
1	Residual	16.74	94	0.178		
	Total	34.421	99			

e. Dependent Variables: WLMEAN

f. Predictors:

(Costant),WE_C_MEAN,VWE_AF_MEAN,VWE_AC_MEAN,VWE_S_MEAN,VWE_R_MEAN



Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.655	0.311		2.102	0.038
VWE_S_MEAN	0.037	0.079	0.041	0.476	0.635
VWE_R_MEAN	0.178	0.083	0.191	2.137	0.035
VWE_AF_MEAN	0.189	0.071	0.212	2.643	0.01
VWE_AC_MEAN	0.135	0.068	0.169	1.98	0.051
VWE_C_MEAN	0.31	0.079	0.353	3.914	0

Table No. 15

a. Dependent variable: WLMEAN

From the collected data from IT, it states that there is impact of independent variable on dependent variable. According to the analysis of the data there is significant impact of independent variable on dependent variable, but the independent factors which were selected for the study there are only three factors which are impacting dependent variable, they are Relational, Affective and Cognitive having significance of 0.035, 0.10, 0.001 which is less than 0.05, and the factors which are not impacting dependent variable are Sensory, Active having significance of 0.635 and 0.051. Were, The factors, Relational, Affective and Cognitive impacts 19%, 21% and 35% on the (dependent variable) Workload Factors.

Findings, Conclusion and suggestions

- From the reliability test it is shown that, the reliability for 30 items stands 0.884 (88.4) which is more than 0.75, that impact on the study hence we can say that we can rely on this data to do further study.
- In connection, there is a critical connection between the reliant and autonomous factors, huge worth is 0.001 which is under 0.05 which shows that there is a huge connection between Virtual Work Environment and Workload Factors. Their front we acknowledge invalid speculation. First goal have been demonstrated that there is huge connection between Virtual Work Environment and Workload Factors.
- In Regression, there is significant impact between Workload Factors and only the three factors of Virtual Work Environment, where R square significance is 0.474, which means it, has 51.4% of significant impact of factors of Virtual Work Environment and Workload Factors. Therefore, we accept null hypothesis. Second objective have been proved that to examine impact of virtual work environment on workload factors and its complexity.
- In the demographic feature the gender group consists of male employees of 44 and female employees of 56 out of 100 employees.



- 39% of employees agree that the audio content of the environment to be of high quality.
- 47% of employees agree that they experience the high level of interaction with computer agents in the virtual environment

Conclusion

Virtuality as an idea has been utilized and characterized in the field of IT for some time. As of late a similar idea has begun to build up speed additionally in sociologies to explore new work structures. By doing this project I understood that Virtual Work Environment is closely linked with Workload Factors. Taking everything into account, with the multifaceted nature and Workload Factors to the Virtual Environment, the request at the lower levels lies in the trade limit of correspondence. Stood out from this at upper levels, the request is in the semantic trade of the message. The progress of distant correspondence eliminates the individual setting that assists us with connecting with one another. It's difficult an issue of furnishing telecommuters with another video correspondence stage and expecting it will be the same old thing. Despite the way that they have inventive capacity to work across time and distance, the reality of the situation is that we need new abilities and practices to do these things. Working in virtual gathering requires essentially more than PCs and advancement. In portable work there are, extra necessities interfacing the gadgets. The exchange to virtual working space gadgets and applications should be achieved paying little heed to the time and location. The functional climate of a versatile representative ought to be convenient just as effectively detectable.

Suggestions

- As the two components of autonomous variable Sensory and Active are not affecting the reliant variable I recommend that to work on the sound, visual, and haptic to be addressed through tangible equipment and programming that causes the sensations. Furthermore, to further develop the individual associations where an individual feels to an encounter. Related with the level of sympathy, distinguishing proof and individual connection an individual feels to the virtual climate symbols, environmental factors and situation.
- As it is totally different from live environments that is real, it sure does have some and many implications, as in the project I have gone through the well study of workload implication from the virtual environment, and I hope since virtual environment is our future researching on it was a tremendous job.
- Finding the ways to our modern problems which is going to the become the solutions to future was so interesting and challenging, as I did my project on this interesting topic, it gave me opportunity to dig deep and know about the new upcoming challenges.
- As the future is evolving technological changes so to find the changes to the technology, we must be ready.

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