International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2019): 7.583

Role of Digital Communication and COVID-19

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Abstract: ***COVID-19 virus has been defiantly the driver for Digital transformation in Oman. Organizations and public where shattered, by this time digital technology plays a vital role. Organizations use various applications to communicate to their employees and succeeded in their tasks. Some of these applications are user friendly, compatible however others are more accurate, reliable and consistence. Organizations are trying their best to improve employee's productivity while they are at home as well as at work. Thus it is worth to evaluate and know best digital communication used and made difference during this time. This research aims to discover the opinions of employees in using digital communication. This study was undertaken with the employees working in different organization. The main focus is related to the digital communicationand itsfeatures. The sample size for the study is 60 employees and the researcher used the descriptive research. Non-random sampling method was used and the data was collected through convenience sampling techniques. The primary data was collected from the respondents through the questionnaire.The outcomes revealed that digital technology used for communication leadsto increased efficiency and effectiveness of employees in fulfilling their tasks.***

Keywords: Digital communication, Covid-19, Education, Digital Transformation

1. Introduction

Digital transformation is defined as a social phenomenon (Stolterman et al., 2004; Henriette, E., Feki, M., &Boughzala, I, 2016) or cultural evolution (Belk 2013; Pardo et al., 2014; Rogers et al., 2011; Pînzaru et al., 2012; Henriette, E., Feki, M., & Boughzala, I, 2016) and for companies as an evolution or creation of business model (Zhu et al., 2006 ; Rogers et al., 2011; Kohli et al., 2011 ; Liu, 2012 ; Gastaldi et al., 2012 ; Berman, 2012 ; Medina et al., 2013 ; Barland,2013 ; Rothmann et al., 2014; Øiestad et al., 2014 ; Pardo et al., 2014; Henriette, E., Feki, M., & Boughzala, I, 2016). However, Henriette and colleagues stated and concluded to define it as "a disruptive or incremental change process. It starts with the adoption and use of digital technologies, then evolving into an implicit holistic transformation of an organization, or deliberate to pursue value creation" (Henriette, E., Feki, M., &Boughzala, I, 2016). This definition fits with this research as it is believed that digitalization has defiantly transform organization holistically.

Covid-19 virus has been defiantly the driver for Digital transformation in Oman. Everything was closed, people they cannot work together, some works was stopped for a while until they realized they need this move now. Governments around the world guided employees to close their offices and asked them to work from home to avoid the spread of the virus and protect workers (SAVIĆ, D., 2020; Fletcher, G., & Griffiths, M. (2020). These made institutions excel in using different types of application to communicate and perform work-related tasks. Example of different types of applications are Zoom, Teams, Google meet, Skype, Goto Meeting, Evernote, Calendly, Zoho notebook. Some of these applications are user friendly, compatible however other are more accurate and reliable and consistence. Organizations are trying their best to improve employee's productivity while they are at home as well as at work. Thus it is worth to evaluate and know best communication technologies used and made difference during this time.

2. Statement of the Problem

Digital transformation is an important aspect in this digital life, however in every new concept; there is a need for endeavor to start it. Covid-19 has been the venture that moved institution and businesses hardly to change their way of dealing with life/transaction. Thus, the way they are dealing with each other's changed, with the huge need for communication technology. However, for some years it appears that employees hesitated/not confident to take advantage of the full communication technology. In the absence of digital knowledge; some countries are back in the modern way of communication. This paper analyses the role of communication technology in the sudden appearance of Covid-19 in different sector in Oman, and which applications are used more during this pandemic. Knowing these applications will help in achieving tasks during difficult situations.

Objective

a) To identify various digital communication used during Covid-19.
b) To analyze the significant difference between the digital communication used before and after Covid-19 by employees.

Scope of the Study

The scope of the study is to analyze the digital communication used by various sectors during this Covid-19. This study helps the organization to choose the best digital communication platform for best communication. The effects of the study help the organization to know the professional standard in using the digital communication and how to achieve the objectives and tasks during difficult situations.

Research Design
The research design used for this study is descriptive type. Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual or a group.

Sample Size
A sample size of 60 was used for this study. The information was obtained through a well-designed questionnaire which was collected through online using all possible sources.

3. Analysis and Interpretation

Different age group of employees and the organization using digitalcommunication before Covid-19:

Null hypothesis (H0): There is no significant difference between the age group of employees and the organization using digital communication before Covid-19.

Alternative hypothesis (H1): There is significant difference between the age group of employees and the organization using digital communication before Covid-19.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Age	2.57	60	1.095	.141
	Before	3.20	60	.953	.123

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Age & Before	60	.019	.883

Paired Samples Test								
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Age - Before	-.633	1.438	.186	-1.005	-.262	-3.413	59	.001

Interpretation:
From the above analysis it is inferred that the difference between the age group of employees and the organization using digital communication before Covid-19 are positively correlated. ($r = 0.019$, $p < 0.001$).

Since the p value (.001) is less than 0.05, it is concluded that there is a statistical significance difference between the age group of employees and the organization using digitalcommunication before Covid-19, so the null hypothesis is rejected. So, it is concluded that the age group of employees has a significant difference in using digital as a communication before covid-19.

T-Test

Different age group of employees and the organization using digitalcommunication after Covid-19:
Null hypothesis (H0): There is no significant difference between the age group of employees and the organization using digital communication after Covid-19.

Alternative hypothesis (H1): There is significant difference between the age group of employees and the organization using digitalcommunication after Covid-19.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Age	2.57	60	1.095	.141
	After	4.33	60	.837	.108

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Age & After	60	.123	.348

Paired Samples Test								
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Age - After	-1.767	1.294	.167	-2.101	-1.432	-10.579	59	.000

Interpretation:
From the above analysis it is inferred that the difference between the age group of employees and the organization using digital communication after Covid-19 are positively correlated. ($r = 0.123$, $p < 0.001$).

Since the p value (.000) is less than 0.05, it is concluded that there is a statistical significance difference between the age group of employees and the organization using digitalcommunication after Covid-19, so the null hypothesis is rejected. So, it is concluded that the age group of employees has a significant difference in using digital as a communication after covid-19.

T-Test

Level of employees and the organization using digital communication before Covid-19:
Null hypothesis (H0): There is no significant difference between the level of employees and the organization using digital communicationbefore Covid-19.

Alternative hypothesis (H1): There is significant difference between the level of employees and the organization using digital communicationbefore Covid-19.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Level	2.10	60	.656	.085
	Before	3.20	60	.953	.123

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Level & Before	60	-.033	.805

Paired Samples Test								
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Level - Before	-1.100	1.175	.152	-1.403	-.797	-7.254	59	.000

Interpretation:
From the above analysis it is known that the level of employees and the organization using digital communication before Covid-19 are negatively correlated. (r = -.033, p < 0.001).

And the p value (.000) is less than 0.05;it is concluded that there is a statistical significance difference between the level of employees and the organization using digital communicationbefore Covid-19, so the null hypothesis is rejected. So, it is concluded that the level of employees has a significant difference in using software as a digital communicationbefore covid-19.

T-Test

Level of employees and the organization using digital communication after Covid-19:
Null hypothesis (H0): There is no significant difference between the level of employees and the organization using digital communication after Covid-19.

Alternative hypothesis (H1): There is significant difference between the level of employees and the organization using digital communicationafter Covid-19.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Level	2.10	60	.656	.085
	After	4.33	60	.837	.108

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Level & After	60	-.247	.057

Paired Samples Test								
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Level - After	-2.233	1.184	.153	-2.539	-1.927	-14.609	59	.000

Interpretation:
From the above analysis it is inferred that the level of employees and the organization using digital communicationafter Covid-19 are negatively correlated. (r = -.247, p < 0.001).

Since the p value (.000) is less than 0.05, it is concluded that there is a statistical significance difference between the level of employees and the organization using digital communication after Covid-19, so the null hypothesis is rejected. So, it is concluded that the level of employees has a significant difference in using digital communicationafter covid-19.

Descriptive statistics

a) Duration taken by the employees to adopt the changes.
b) Are they able to achieve the objectives through this digital communication process during COVID-19.
c) Rating the professional standard in the organization using digital communication.

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Duration of changes adopted	60	1	3	1.60	.616	.380
Achieving the objectives	60	1	5	3.73	.972	.945
Professional standard in communication	60	2	5	3.97	.758	.575
Valid N (listwise)	60					

Interpretation:
From the above table it is inferred that the average mean value in rating the professional standard in the organization in using information system is 3.97. There is a similarity between the individual data point of the mean, the standard deviation is lesser as 0.616.

The average mean value to achieve the objectives through digital communicationduring Covid-19 is 3.73. Since there is more individual data point differ from the mean, the standard deviation is higher as 0.972.

The average mean value for the duration taken by the employees to adopt the changes is 1.60. The observed standard deviation is 0.616.

It is also clear that the achieving the objectives and rating the professional standard in communication is almost similar than the employees to adapt to the duration of changes.

Ranking

Level of satisfaction of the features in the usage of current software's:

Factors	Total Score	Weighted Average	Rank
User friendly	244	27	I
Compatibility	226	23	V
Reliability	236	26	II
Consistency	231	24	IV
Accuracy	249	25	III

Interpretation:
It is well understood from the above table, the ranking for the features used in the current software's are user-friendly, followed by Reliability, Accuracy, Consistency and Compatibility.

To what extent do organizations perform tasks?

Factors	Total Score	Weighted Average	Rank
Training & Development	242	26	II
Communication	248	27	I
Performance Appraisal	221	24	IV
Leadership Management	237	25	III
Managing relations	215	23	V

Interpretation:
From the above table it is understood that the organization performed the task well by using digital technology.Factors like communication achieved in an excellent way through this digital communication. Training& Developing the employees also has a good effect, followed by Leadership management, Performance Appraisal and managing relations.

Rank the software's used for communication by organizations:

Factors	Total Score	Weighted Average	Rank
Zoom	288	32	II
Evernote	216	24	VII
Go to meet	282	31	IV
Skype	298	33	I
Calendly	254	28	VII
Teams	290	32	II
Google meet	288	32	II
Zoho	276	30	V
Others	266	29	VI

Interpretation:
The digital communicationused during this covid-19 are ranked, respondents gave first ranking to Skype. Google meet, Teams and Zoom placed second ranking, followed by Ever note, Zoho, Calendly and other forms of communication.

4. Suggestions

From the analysis it is suggested that the digital communicationplays a vital role during this pandemic.

This study provides a positive link between the age of the employees and the usage of software's in communication technology before and after Covid-19.

The managers should provide training to the employees in using the digital communicationand to create more application to enhance the performance of the employees.

Few respondents have given a suggestion as internet problem faced during communication and important issues and it is not that much effective as direct communication, so proper consideration should be given in view of employees.

More features can be developed in the digital communicationso that it will be more user-friendly and interface.

The organization should follow some rules and regulations for the transparency in using this digital communication. It will pay for guidance and co –operation among the employees.

Most of the applications enable the communication and collaboration in a secured environment and is designed as a virtual office that one can take anywhere they go, so to be developed much more as per the need and remote places where internet is not fast.

Security and privacy should be of paramount importance as users and devices are vulnerable to attacks.

5. Conclusions

It is clear from the above study; the digital communication could be improved from the employees and employers perception as we have no proper assumption relation to the environment. Changes happen at any times. Digital communication significantly improved the organization performance and improvement in communication. Over all, the drawbacks of digital communicationto be overviewed and updated for the betterment of the organization to achieve their goals.

Since many tools are related with this digitdigital communicational technology, it is important for the management to train the employees relating to the concept. Digital communicationhas impact on achieving the organization objectives and the success of the organization especially during difficult pandemic situation and other environmental challenges. Thus, digital communication maximizes the efficiency of the organization in achieving the tasks and to work together effectively.

6. Limitations

- Very few researches have done research in this invested topic so the researcher could not get an elaborate review.

- This study has used a sample size of 60 for its analysis, since it is very small the result will not be a generalized one.
- Busy schedule of the staff in the organization prevented the researcher from giving more details for the study.

7. Scope for Further Research

1) To find the significant areas in implementing digital communicationin various organization.
2) To study the preferred human resource information system software for the HR professionals.
3) To study the need of psychology in managing the human resources relating to digital communication.
4) To study how effectively quality management plays a vital role in digital communication.

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