A study of the factors that affect virtual teamwork engagement during the COVID-19 pandemic in reference to ABC (Private) Limited

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Abstract

Due to globalisation and technological advancements, there is a tendency for companies to change the working environment from a physical one to a virtual one. With the Covid-19 outbreak, many organisations started conducting their businesses virtually. The employees of these organisations began to work as virtual teams by locating in different geographical areas. ABC (Private) Limited, a pioneer in the BPO sector of Sri Lanka started working virtually during the pandemic. Teamwork plays an important role at ABC and the formation of virtual teams has greatly impacted employees' engagement in terms of communication, knowledge sharing, social factors, and training. This study examined the current situation at ABC to identify the impact of working in a virtual environment on teamwork engagement. Primary data was collected by interviewing 14 employees from different hierarchical levels. Purposive sampling was used to select the employees. A qualitative study was conducted using an inductive approach. The findings of the thematic analysis conducted indicate that technology, communication, trust, accountability, and training affect virtual teamwork engagement. This study found that these factors need improvement for the smooth functioning of the teams and to improve efficiency. This study has provided recommendations on how to overcome the issues identified.

Keywords: Virtual Teams, Team Engagement, Remote Work, Teamwork, Covid-19 pandemic

1. Introduction

1.1 Background to the study

A virtual team is a group of people who work collectively by staying in different geographical locations to contribute to a common project with the support of information and communication technologies (Ale Ebrahim, Ahmed & Taha, 2009). The definition of a virtual team implies that the key requirement for virtual team formation is communication technology. Thus, with the advent of the Internet, many companies worldwide initiated a virtual workplace environment by considering its advantages to employees and employers.

During the last 20 years, virtual teamwork has shown growth due to the evolution and development of the digital era (Garro-Abarca, Palos-Sanchez, & Aguayo-Camacho, 2021). However, according to the study conducted by Brett, Behfar & Kern (2006), people tend to think that virtual communication is not as effective as physical face-to-face communication. Due to this, virtual teams were not popular among organisations and they continued with traditional work environments. However, with the emergence of the Covid-19 pandemic in 2020, many companies in the world, started using virtual workplaces considering safety, and the lockdown.

1.2 Organisational overview

ABC (Private) Limited is a business processing outsourcing (BPO) company, specialising in the Information Technology (IT) sector. ABC's vision is to support Industry 4.0 of Sri Lanka and to be a global leader in innovation. ABC has expanded throughout four service sectors: artificial intelligence (AI) solutions, data services, engineering services, and managed services, working with 11 different industries.

1.3 Research Problem

At ABC, teamwork plays a major role as every team is given a predefined target to be achieved every month. Several departments work together to achieve the given target. Hence, teamwork plays an important role in the company. Due to the pandemic in Sri Lanka, ABC started working virtually in April 2020. Though ABC is an IT-based company, its technical facilities were insufficient to support a virtual workplace. Thus, several issues and interruptions were created in the business process during the pandemic.

An employee of ABC works for 8 hours daily and ABC maintains an average of 94%-98% of output quality. Figure 1 depicts the change in work hours before and after shifting from a physical to a virtual environment. Figure 2 shows the variation in the output quality. According to the statistics, there is a drastic decrease in the output quality and an increase in the working hours. Therefore, it is important to study the reasons for this decline in quality and increase in work hours during the shift to a virtual work environment.

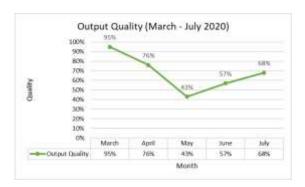

Figure 1. Employee work hours (May - July 2020)

Figure 2. Output quality (May - July 2020)

1.4 Research Aim

This study aims to examine the factors that affect virtual teamwork engagement during the Covid-19 pandemic in reference to ABC (Private) Limited.

1.5 Significance

Through the research findings, ABC's management can initiate strategies to improve the quantity and quality of the work output even in a virtual work environment. This research will also contribute to the limited studies on virtual teams in Sri Lanka by providing valuable information about the factors influencing effective teamwork engagement in a virtual environment.

1.6 Scope

14 employees of ABC (Private) Limited including all the hierarchical levels were interviewed to obtain their views on teamwork engagement in a virtual work environment.

2. Methodology

2.1 Research Design

The research onion model was developed by Saunders, Lewis, and Thornhill (2007) and it describes the stages that have to be completed by a researcher to develop an effective research methodology (Melnikovas, 2018; Raithatha, 2017). Due to the adaptability feature of the research onion, it can be used in developing research methodologies in different fields (Bryman, 2012). Hence, by considering these facts, the researcher is using a research onion model to develop the methodology for the research.

Saunders, Lewis, and Thornhill (2007) identified three main research approaches deductive, abductive, and inductive. An inductive approach is an approach that is moving from specific to general (Bryman & Bell, 2011). By starting from the observations, the patterns are searched within the data collected (Beiske, 2007). This study used the inductive approach.

2.2 Methodological Choice

The qualitative method uses descriptive data and aims to study the respondents' explanations of their reality (Bryman & Allen, 2011; Melnikovas, 2018).

Since this research is about teamwork engagement, it is important to gather rich data on the participants' feelings, opinions, and experiences. The researcher needs to avoid pre-judgment within the data collection process and focus more on collecting different viewpoints of the participants. This study therefore used the qualitative research method.

2.3 Research Strategy

Participants' ideas and perspectives on a situation can be explored well by conducting in-depth individual interviews with a small set of interviewees (Boyce, Neale, 2006). This study therefore used interviews as the research strategy.

2.4 Population and Sampling

The population size of ABC (Private) Limited is 1000 employees. This study used the sampling technique for the population of the study. The population was categorised into non-overlapping strata considering their job role and then, a sample of 14 was selected from each stratum.

2.5 Data Collection Method

The data collection involved face to face interviews with the participants.

2.6 Data Analysis Method

This study used thematic analysis to analyse the primary data. Thematic analysis is an analysis method used for qualitative research and it analyses the data gathered through interviews in an organised, detailed, and comprehensive manner.

3. Analysis and Findings

Interviews were conducted using a semi-structured questionnaire for the selected employees representing different hierarchical levels. The interviewees were allowed to express their ideas and suggestions freely with the assurance of not disclosing their identity or the interview results to the company. The interviews provided the researcher with valuable data due to the flexibility, and confidentiality practiced during the interviewing process. Table 1 illustrates the summary of the profiles of the interviewees.

Table 1. Profiles of the Interviewees

Interviewee	Job Role	Service Period
A	Associate Image Processor	1.5 Years
B	Associate Image Processor	4.5 Years
C	Associate Image Processor	3 Years
D	Quality Checker	5 Years
E	Quality Checker	2 Years
F	Quality Checker	1 Year
G	Team Leader	7 Years
H	Team Leader	4.5 Years
I	Team Leader	5 Years
J	Lead Business Analyst	7 Years
K	Business Analyst	9 Years
L	Business Analyst	5 Years
M	Project Manager	9 Years
N	Project Manager	6.5 Years

3.1 Technology and Virtual Teamwork Engagement

ABC has used several software applications during the pandemic period to continue the smooth functioning of the company's business process. The applications used by the teams are Email, Microsoft Teams, Telegram, WhatsApp, Zoom, and Virtual Network Computing (VNC). It allowed the employees to share the screen simultaneously while communicating

through mobile phones. The interviewees agreed that the presence of VNC allowed them to engage more as a team and reduce the occurrence of numerous unnecessary misunderstandings. This supported the view of Straus and McGrath (1994), on the similarity between technology-driven teams and teams working face-to-face on simple tasks.

According to the feedback given by the interviewees, it can be concluded that the technology has given significant support to maintain the smooth functioning of ABC's business process. However, few interviewees suggested upgrading the provided technical equipment to improve their efficiency further. Furthermore, a suggestion to conduct video conferencing was raised by the Quality Checkers and Project Managers. They believed that using video conferencing may help to keep the team more engaged.

Participant A stated, "Technology helped us a lot in getting clarifications from the Business Analysts. Screen recordings were used to store the conversation for future reference."

Participant D stated, "Technology helped us a lot when working as a virtual team. It allowed us to access software and applications easily. It was like all the required supportive tools were placed at our fingertips. It helped us to save time and to work more efficiently."

3.2 Communication and Virtual Teamwork Engagement

At ABC, team connectivity is highly required to receive a quality output. Hence, communication played a substantial part during the COVID-19 pandemic to maintain the interconnectivity among team members. Since most of the team members are youngsters, communication through social media platforms was convenient and reliable for the users. As proven by Fish, Kraut, Root, and Rice (1993), informal communication is essential for successful collaboration of a team. Furthermore, they received a chance to improve their formal communication techniques due to the virtual working environment and they appreciate the chance they received to learn professional communication platforms introduced by the company, like Zoom,

Microsoft Teams, etc. Similar to the view of Shaik and Makhecha (2019), frequent formal communication has encouraged them to achieve their defined objectives.

However, contrasting viewpoints were collected from the interviews conducted with the employees in upper hierarchical levels such as Business Analyst, and Project Managers. From their interviews, it was revealed that several issues arose due to the communication conducted while working virtually. Frequent occurrences of technical failures, the absence of a proper communication platform, and the lack of technical support given by the company were the main issues generated during the pandemic period. Moreover, they encountered difficulties in contacting the team members in case of emergencies and it created an unnecessary distance between the colleagues. A few suggestions were presented by the participants during the interviews by addressing the issues they faced, due to lack of communication during the pandemic period.

Participant B suggested developing a procedure to have group discussions on making decisions whenever required to bring everyone to the same page. On the other hand, participant J suggested implementing an effective internal communication platform to increase engagement among the team in terms of virtual communication. Furthermore, participant N provided his idea of having frequent one-to-one sessions between the team members to keep everyone engaged in the achievement of team objectives.

Participant F stated, "We had a very effective communication method throughout the pandemic period and it helped us a lot to complete our work more efficiently. We never got the feeling that we were isolated. We used to have casual chats as well. So, I think that we had a very engaged team even during the pandemic period thanks to the power of communication and technology."

Participant N stated, "Though the communication channels used during the pandemic were not very advanced, we managed communicate well. Also, we can say that almost everyone's communication skills were improved due to this pandemic situation.

However, we had difficulties in contacting the team members in case of emergencies".

Participant L stated, "The absence of physical communication leads to the formation of complicated, sometimes unrealistic issues while working virtually. Maybe the trust issues among the team members have led the path for creating such useless issues."

3.3 Trust and Virtual Teamwork Engagement

Trust among the team members is important for proper team work. The interviewees agreed that team trust was good during the pandemic period. Panteli and Sockalingam (2005) found that conflict reduction is easier where the team member trust each other. The interviewees said that trust helped them to achieve their allocated targets more efficiently.

However, contrasting ideas on team trust and transparency among colleagues while working in the virtual environment were given by several other participants. The lack of transparency between departments and miscommunications resulted in the loss of trust among the team members. However, the majority of the participants agreed that there were no considerable issues that affected team engagement in terms of team trust and transparency while working virtually.

Participant I stated, "Normally our team has a greater bond between each other and I believe that I always have to maintain that trust in the team as their leader. Having such a strong, effective team bond resulted in our team achieving the allocated targets quicker during the pandemic period than when we worked physically at the office."

Participant B stated, "Actually, there were some trust issues that happened during the pandemic period. From my point of view, I think that not giving respect for each other's ideas and suggestions resulted in the occurrence of these trust issues. Some didn't respect the value of the other's job role and they tried to get their work done even by pressuring the other party."

Participant N stated, "Yes, there was a lack of transparency between the different departments while working virtually, since we weren't able to have effective communication during that period. Some miscommunication happened on several occasions and they caused some problems."

3.4 Training and Virtual Teamwork Engagement

Training employees has a considerable effect on the team performance of ABC. Proper training is essential for an employee to perform well. Thus, the effectiveness of training is an important factor for all the team members of a team. However, from the data gathered from the interviews, the lack of effective training was thought to have affected team engagement.

Lack of behavioural communication such as facial expressions affected the trainers in depicting the trainees' level of understanding of the content. Clarity of the content delivered during the training is doubtful as unlike in physical training sessions, the trainers cannot question the participants on the content discussed in virtual training effectively. The trainees also cannot ask questions from the trainers or receive instant answers from them during virtual training. Moreover, no excitement is present in virtual training as the trainers cannot do any extra activities to increase the teams' engagement.

Some positive feedback was given by some of the interviewees. As explained by a Project Manager, they were able to save energy, resources, and time by conducting the training virtually. Another point highlighted in Participant B's feedback was that unlike in physical training sessions, they were able to have recordings of the virtual training sessions for future reference. Participant B explained that the availability of recordings helped their team to go through the instructions, even after the training was concluded through group calls and team discussions.

Participant E stated, "Virtual training was not effective, because we could not see the trainees' actions or body language."

Participant K stated, "Virtual training is not effective at all. There was an incident in my project, where we were instructed to conduct a virtual training for a project to fulfill a high-level requirement of the client. However, we were not able to conduct the knowledge-transferring sessions online in an effective way, since the new recruits lacked proper understanding. Since this method was not effective at all, we decided to conduct the training in a physical environment under strict health security considering the pandemic situation."

3.5 Accountability and Virtual Teamwork Engagement

When working as a team, every person should be accountable for their actions, speech, and behaviour. Being accountable in a virtual environment is a critical requirement to maintain the smooth functioning of the process. As a company with a business process that relies on teamwork, it is necessary for ABC to have a team that values accountability. From the analysis of the feedback received from the participants, it was shown that there was a lack of accountability among the team members while working virtually during the pandemic period. Ignorance of duties was visible among the team members and the decrease in accountability resulted in issues related to trust and performance.

Every participant had negative feedback on accountability among team members and its effect on team engagement during the Covid-19 pandemic period. However, the interviewees were unable to make suggestions on how to improve the situation, although they understood the importance of accountability for effective team engagement.

Participant M stated, "I must say that it was not at a satisfactory level. Everyone raised complaints about each other during this period. So, a team without accountability has very low team engagement. The team suffered due to the lack of accountability among some team members."

Participant H stated, "I think that accountability has a connection to a person's moral qualities. As a human, they should understand that they have to be accountable for what they do and say. We have to accept the fact that there are different kinds of people in the world and have to adjust according to the situation."

3.6 Company Processes/Policies and Virtual Teamwork Engagement

The interviews revealed that working virtually considerably affected the company's general processes and procedures. Changes in the working environment have created issues related to misuse of company resources. Some team members blamed technical issues for the lack of work progress.

Participant N stated that the company had issues with securing the confidentiality of company data in a virtual environment. Generally, ABC follows a strict set of rules on data confidentiality, as they are working with a foreign client. Yet, when working virtually, the company had no option except to pass raw data to the workstations, which are located in the employees' residences."

Participant F stated, "The employees of ABC are paid according to the quality and quantity of the output provided. With the change in the working environment to a virtual one, we experienced a greater reduction in the quality of the work we received for reviews. There were situations where the work went through as much as 20 reviews and rework. So, in such situations, even though the employee had worked extra hours, he or she did not get any extra payment, due to the excess time spent on the work. As a team, we have to work collectively to avoid unwanted rework."

Participant H stated, "There was a drastic increase in the work hours of the data entry operators during the pandemic period. The reasons for this were slow connectivity, technical issues, etc. Furthermore, we had issues in monitoring the data entry operator's quality level in the virtual working environment. Furthermore, some were caught not following due process."

4. Conclusion

Working in a virtual environment was a new experience for the entire staff of ABC and they encountered several issues due to this. Due to business processes that relies mainly on teamwork, the teams must maintain a high level of engagement among each other. However, factors such as technology, communication, trust, accountability, change in company processes and policies, and virtual training influenced the teamwork engagement of ABC.

It was clear from the feedback of the interviewees that the usage of technology has significantly affected performance and work quality while working virtually. Screen sharing ability given through the VNC technology mitigated the creation of several unnecessary trust-related issues. However, due to the lack of upgraded hardware and connectivity issues in the virtual work environment, the employees of ABC faced slowness, connectivity issues, and quality drops in the video clips. It directly affected the efficiency and the team members' effectiveness creating several managerial issues on net time and quality of work.

Usage of unfamiliar applications such as Telegram, Zoom, and Microsoft Teams was a challenge. Social media platforms were popular especially among the young staff members. Regular communication reduced the feeling of isolation among the team members and helped to improve team engagement throughout the pandemic. However, technology-related issues affected the effectiveness of the communication channels used by the staff.

According to the interviewees, trust among the team members has a positive influence on the performance and team engagement of ABC. However, working in a virtual environment negatively affected trust. Lack of accountability and technical issues were identified as the causes of distrust among the team members.

Training is a frequent activity conducted for the ABC employees, due to frequent changes in instructions and requirements of the clients. According to the feedback received, unlike in physical training conducted in the past, the participants of the training sessions could not share their ideas and issues effectively in a virtual environment. In physical training, the team worked collectively in sharing their ideas and clearing doubts. Virtual training did not give the same results as physical training.

As mentioned previously, lack of accountability had a close relationship with the absence of trust among the team members of ABC. As mentioned by the interviewees, there was a drastic decrease in accountability among the team members which significantly affected teamwork engagement.

5. Recommendations

Implementing an effective internal communication platform

An effective internal communication platform has to be implemented to enhance communication among colleagues. The team members should not feel isolated, as they are working virtually and they should be able to communicate effectively as they did while working physically. In situations where the employees recognise that they are receiving information from the management, that is timely, accurate, and relevant, they will not feel vulnerable and will depend on colleagues and supervisors (Thomas, Zolin, & Hartman, 2009) Furthermore, the company should guarantee the connectivity level of the communication channels as interrupted communication platforms might create further issues rather than improving team engagement.

Regular one-to-one sessions with team members

The team members of ABC are used to working closely with their colleagues as well as their superiors. They received daily progress on their performance through their superiors and it helped the team members to trust their colleagues for their support to improve their performance. According to Gallup (2022), engagement is three times higher among the employees who are having regular meetings with their superiors than the ones who do not. With the change in the work environment to a virtual environment, they missed the chance of receiving regular feedback. Hence, to maintain the engagement among the superiors and team members, it is recommended that ABC conduct regular one-to-one sessions to mitigate the

feeling of isolation and to increase trust among the team members.

Feedback and reviews on daily production output

It is recommended that the supervisors should provide their feedback to the production team on a daily and weekly basis to guide the team on their work. Conducting these review sessions will help ABC to improve accountability of the employees by increasing productivity, motivation, and team engagement. Moreover, individual-based discussions on daily output levels help to improve mutual understanding among the team members. Mesmer-Magnus, and DeChurch (2009) have stated that collective knowledge sharing is effective in problem solving.

Video conferencing sessions for training programmes

Since the virtual work is a new experience to the employees of ABC, the lack of physical presence of the colleagues during training sessions has generated a feeling of being isolated among the team members. Zoom video conferencing creates a socially positive learning environment by allowing learners to interact with each other (Sutterlin, 2018). Hence, it is suggested that conducting Zoom video conferencing training sessions will help to improve engagement for training.

Upgrading the hardware/software

The hardware and software of ABC have to be upgraded to meet the demands of a virtual work environment. Using the latest versions of the software will help the teams to be more productive and efficient. New or upgraded hardware will reduce issues such as slowness, network errors, and connectivity issues.

Acknowledgments

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