

Continuation of Virtual Meetings to Combat Climate Change and Reduce Time, Cost, and Visit: Prospects and Challenges in the Government Offices in Bangladesh

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ABSTRACT

Virtual meetings made official meetings possible during the COVID-19 pandemic, contributed to the reduction of fossil fuel consumption, and saved time, cost, and travel time for officials. Considering the benefits, it is essential in the present context to study if the continuation of virtual meetings in the post-COVID period is required or not. This research tries to explore how effective virtual meetings were during the pandemic period of COVID-19 in government offices in Bangladesh and if their continuation in the future is feasible or not. This study investigates the difficulties in hosting and organizing virtual meetings that various district and Upazila-level government offices in Bangladesh face. The views of government officials posted in 24 districts about the prospects of virtual meetings and challenges are analyzed in this study. Acknowledging the prospects and challenges, it is suggested that the continuation of virtual and, in some cases, hybrid meetings are required in government offices to assure sustainable development and obtain success in the Fourth Industrial Revolution.

KEYWORDS: Virtual meetings, In-person meetings, Climate Change, Government offices, Bangladesh

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INTRODUCTION

With the rapid outbreak of COVID-19 disease in March 2020, Bangladesh faced a strict lockdown which triggered the introduction of virtual meetings in the government and non-government offices. Virtual meeting application “Zoom” became very famous for hosting online meetings and most of the offices used to host through their free id of zoom application. In the beginning, people faced difficulties as it was a new platform but gradually people are getting skilled and more comfortable with online meeting tools. Online meeting tools have been useful in dealing with emergencies as well as saving time, cost, and official visits. If environmental factors are considered, virtual meetings are much more environmentally friendly than in-person meetings (Tao, Steckel, Klemeš and You, 2022).

To mitigate climate change, Goal 13 of the Sustainable Development Goals (SDG) demands a reduction in greenhouse gas (GHG) emissions (Climate Change - United Nations Sustainable Development, 2022). When moving from in-person to virtual conferences, the carbon footprint can be reduced by 94% (Tao, Steckel, Klemeš and You, 2022). The world is facing a crisis of fuel price hikes due to the Ukraine-Russia war and the natural gas reserve of Bangladesh is depleting. Under these circumstances, virtual meetings can contribute to reducing fuel consumption appreciably.

There is no survey yet in Bangladesh about government officials’ thoughts on reducing fuel costs and other expenses by choosing virtual meetings over in-person meetings. Internet facilities in all districts of Bangladesh are not the same. Hence, the efficacy of online meetings is not the same all over the country. There is a knowledge gap about the performance of virtual meetings in the government offices of the capital of the country and other different districts and if they are ready to accept it as an alternative to in-person meetings. The objectives of the study were to explore:

1. Investigating how fruitful virtual meetings were during the pandemic situation.
2. Exploring the opportunities of virtual meetings to make it a popular alternative to the in-presence meeting.
3. To study the ICT advancement of government offices.

4. Exploring the setbacks in the government offices to make the virtual meetings successful.
5. To find out the way forward to overcome the challenges.

LITERATURE REVIEW

Every country is increasing its Green House Gas (GHG) emissions in the name of development which is risking our environment. The average temperature of the Earth is getting higher, the air is getting polluted, and various types of diseases are getting spread worldwide. For office purposes, a huge amount of fossil fuel is getting burnt every day and the fuel reserve of the world is depleting as well (Climate Change - United Nations Sustainable Development, 2022). Virtual meetings during the COVID-19 situation have shown that meetings can be done successfully through online tools and it can save time, cost, and visits significantly. Another noteworthy criterion of virtual meetings is that it is a greener alternative to traditional in-person meetings (Tao, Steckel, Klemeš and You, 2022). The fuel combustion got significantly reduced during the lockdown period of the pandemic and the air quality got improved. As global warming needs to be controlled, this greener alternative to in-person needs to be considered to combat climate change.

Before the COVID pandemic, online meeting tools were less popular than in the present context. The practice of Video conferences was there for people who are in a geographically distant location. However, online meetings among inter and intra-offices in the same city or district became popular with the initiation of the “Home office”. In the beginning, people felt trouble with the online meeting tools as they were new to most of them. However, people are well acquainted with the online platform now and they are realizing the benefits of virtual meetings (Rubinger et al., 2020). Because of the practice of the home office, most offices have good Internet access now and their employees have become adapted to the online meeting tools.

Despite having many good sides, there are some shortcomings of virtual meetings like it is not so good for building social networking and people may feel isolated as there are no physical interactions. In the case of in-person meetings, people get the chance to meet physically their colleagues and share their ideas and feelings. Realizing the blessings of virtual meetings, its practices can be increased but side by side the

practice of in-person meetings should be continued as it is required for socialization and efficient teamwork (D'Anna, D'Arco and Van Goethem, 2020).

Virtual meeting fatigue is another important issue that meeting participants face very often (Epstein, 2020). In many cases, the meeting continues for more than a couple of hours and people become sufferers of screen fatigue. It is also difficult to give full concentration in online meetings for long hours. Very often meeting attendees get engaged in multitasking not giving full attention to the virtual meetings (Lyons, Nevo and Albany, 2010). However, multitasking virtually has some positive aspects also like someone can check important emails and give emergency decisions rapidly (Lyons, Nevo and Albany, 2010).

As the mortality and morbidity in COVID-19 are decreasing day by day, people are getting back to their traditional in-person meetings. However, if the climate change issues are considered, the continuation of virtual meetings is very much necessary. Again, virtual meetings also contribute to the reduction of meeting-related expenses. If the shortcomings of virtual meetings are considered, there is a need for hosting in-person meetings to make people feel socially connected. Considering the prospects and challenges of virtual meetings, Hybrid meetings can be considered as an option where fully virtual meetings are not feasible in which some will join virtually and some physically (Tao, Steckel, Klemeš and You, 2022).

METHODOLOGY

In this research, the mixed methodology of Qualitative and Quantitative methodology is used. The questionnaire comprised both close-ended and open-ended questions. The data analysis method used in this study is descriptive. The frequency percentage description table is used in most cases to examine and represent the data.

The questionnaire comprised of total 15 questions. Among them five questions were about the demographic profile of the respondents, seven questions were close-ended and three were open-ended questions. Data was collected by taking interviews with some respondents using this structured questionnaire and sending the questionnaire through email to the other respondents.

A total of 45 respondents provided their thoughts through the

questionnaire. They are posted in the district and Upazila offices in 24 districts in Bangladesh. The prospects and challenges of virtual meetings in the government offices mentioned by the respondents are described thoroughly in this research.

FINDINGS

The survey is carried out to know how effective virtual meeting is as an alternative to in-person meetings in government offices in Bangladesh. Responses of a total of 45 respondents are examined in this research. Data was collected through an online questionnaire and interview using the structured questionnaire. Among the 15 questions, the first five were about the demographic profile of the respondents and the others were about virtual meetings' efficacy, prospects, and challenges in the respective offices of the respondents.

Table 1: *Frequency and Percentage of Male and Female Respondents.*

	Male	Female	Total
Percentage	73.3%	26.7%	100%
Frequency	33	12	45

Among the total 45 respondents, 12 are female government officials and the rest are male.

Table 2: *Frequency of the Districts the Respondents are posted.*

Name of the District	Frequency
Bandarban	3
Barishal	1
Brahmanbaria	1
Chittaganj	2
Cox's Bazar	1
Cumilla	1
Dhaka	10
Faridpur	1
Gazipur	1
Jhenaidah	1
Khulna	1
Manikganj	4
Moulavibazar	2
Munshiganj	1

Name of the District	Frequency
Narayanganj	2
Patuakhali	1
Pirojpur	1
Rajbari	1
Rangamati	2
Rangpur	1
Sherpur	1
Sunamganj	1
Sylhet	2
Total	45

Out of the 45 respondents, 10 are posted in Dhaka, and others are posted in 23 other districts.

Table 3: *Frequency and Percentage of Respondents Who Believe Virtual Meetings can be a Good Alternative to In-Person Meetings*

	Yes	No	Maybe	Total
Percentage	44.4%	26.7%	28.9%	100%
Frequency	20	12	13	45

From table 3 it is well understood that majority of the government officials believe that virtual meetings have the potential to be a good alternative to in-person meetings.

Table 4: *Efficacy of Virtual Meetings in the Government Offices During COVID 19*

Weight	Frequency	Percentage
5	7	15.6%
4	21	46.7%
3	16	35.6%
2	1	2.2%
1	0	0%
Total	45	100%

From table 4 it is easily understood that the efficacy of virtual meetings during the COVID-19 crisis period was more than average. If the shortcomings can be improved, virtual meetings can be continued in the future with more efficacy and satisfaction.

Table 5: *Percentage of Government Offices with High-Speed Internet Facilities*

	Yes	No	Total
Percentage	62.2%	37.8%	100
Frequency	28	17	45

Though the majority of the government offices have high-speed Internet facilities, still a significant number of offices are lagging behind and this condition needs to be improved.

Table 6: *Percentage of People Who Believe Virtual Meetings are Useful for Impaired Employees*

	Yes	No	Maybe	Total
Percentage	56.6%	17.8%	26.7%	100%
Frequency	25	8	12	45

Though the majority of the government offices have high-speed Internet facilities, still a significant number of offices are lagging behind and this condition needs to be improved.

Table 6: *Percentage of People Who Believe Virtual Meetings are Useful for Impaired Employees*

	Paid Meeting Id	Free Meeting Id	Total
Percentage	24.4%	75.6%	100%
Frequency	11	34	45

According to this survey, about 75.6% of government offices still rely on free meeting ids for hosting virtual meetings.

Table 8: *Percentage of People Suffering from Screen Fatigue during Virtual meetings*

	Yes	No	Sometimes	Total
Percentage	42.2%	17.8%	40%	100%
Frequency	19	8	18	45

It is found in this survey that screen fatigue occurs very commonly among virtual meeting attendees.

Table 9: *Percentage of People Feeling Isolated in Online Meetings*

	Yes	No	Sometimes	Total
Percentage	46.7%	26.7%	26.7%	100%
Frequency	21	12	12	45

A good number of meeting attendees experience the feeling of isolation regularly or sometimes during virtual meetings as found in this survey.

Table 10: *Percentage of Respondents Believing Virtual Meeting Reduces Fuel Consumption and Meeting Expenses*

	Agree	Disagree	Total
Percentage	91.11%	8.89%	100%
Frequency	41	4	45

About 91.11% of respondents are positive about the statement that virtual meetings can reduce fuel consumption and meeting-related expenses.

Table 11: *Benefits of Virtual Meeting Mentioned by the Respondents*

Benefits	Frequency	Percentage	Rank
Reduces Costs	15	23.07%	1
Saves Time	12	18.46%	2
Reduces Visits	9	13.85%	4
Opportunity for Multitasking	4	6.15%	6
Good for Rapid decision making	5	7.70%	5
Good in the Pandemic situation	4	6.15%	6
Scope of working from own comfort zone	3	4.62%	7
The flexibility of location for attendees	10	15.38%	3
Video Recordings for record-keeping	1	1.53%	9
Less scope for an excuse for not attending	2	3.08%	8
Total	65	100%	

Description of some of the important benefits identified by the respondents are:

Time, Cost, and Visit Reduction: Choosing online meetings over in-person meetings regularly significantly reduces fuel consumption and other meeting arrangement-related expenses. Staying in own office or any other favorable place, one can join the meetings of other departments or own head office through the online platform and save the time required to reach the meeting place. One can join several virtual and hybrid meetings in a day from any location and reduce visits to other offices by multiple times.

Multitasking: Virtual meetings provide the scopes for multitasking which can have both positive and negative effects. The positive aspect is that in case of emergency issues, one can address the issues and make urgent decisions. The negative aspect is that people became busy with other activities, engaging less in the meetings.

Rapid Decision Making: Sometimes urgent situation arises in the organization that demands rapid decision-making. In these emergencies, through online meeting tools, meetings can be called and hosted very easily. For these reasons, virtual meetings are very helpful to respond immediately to emergencies.

Meeting in Pandemic situation: Virtual meeting tools especially “zoom” was very successful and popular during the COVID-19 pandemic. People joined meetings from home through this application and carried out office work.

Working from own Comfort Zone: Virtual meetings allow one to work from own comfort zone which can be at home or allotted room in the office building. To attend meetings called by other offices, people have to travel experiencing traffic jams and other troubles. These can be minimized by choosing virtual meetings. One can attend the meeting from their comfort zone and work peacefully.

The flexibility of Location: Geographical distance is no longer a barrier to joining any meeting due to the virtue of virtual meetings. Attendees can join from any corner of the country and participate in the meeting. This flexibility also contributes to more participation in the meeting as some can be outside of the meeting place for more important tasks and they can join virtually with this opportunity.

Video Recordings for record keeping: With online meeting tools it is very easy to keep video recordings of the meetings. This feature helps to record important issues raised in the meetings for future usage. In the case of in-person meetings, it required some effort and arrangements to keep video records of the meetings which are just a matter of one click in the case of virtual meetings.

Reduced absence from meeting: People remain absent in the cases of in-person meetings sometimes for valid reasons and sometimes for invalid reasons. In the case of virtual meetings, this excuse giving is less as people can join the meetings from anywhere if they have an Internet

connection on their mobile phones. People can now solve office issues anytime from anywhere and physical presence in the office compound is no longer mandatory to run the office works smoothly.

Table 11: *Setbacks of Virtual Meeting Mentioned by the Respondents*

Setbacks	Frequency	Percentage	Rank
Interrupted Internet Connection	11	25%	2
Poor IT skills of meeting attendees	5	11.36%	4
Less Collaboration among meeting attendees	3	6.82%	5
Inactiveness and inattentiveness	12	27.27%	1
The sudden call for a meeting	1	2.27%	7
Avoidance of raising critical points due to the video recording system	2	4.54%	6
Feeling of isolation	1	2.27%	7
Interrupted Power supply	3	6.82%	5
Ineffective alternative to in-person meetings in some cases	6	13.63%	3
Total	44	100%	

Description of the major challenges for virtual meetings identified by the respondents are:

Interrupted Internet Connection: Respondents who are posted in the Upazilas of different districts other than Dhaka have mentioned interruption in Internet facilities as one of the key problems they face during virtual meetings. During the discussion of critical agendas, some officials get disconnected and it hampers the flow of the meeting very badly.

Poor IT skill of meeting attendees: In the public offices of Bangladesh, there are employees from different age groups and the IT skill of everyone is not the same. The adaptation to online meetings was not easy for the aged officials at the beginning of the COVID lockdown in the country. In the present context, the scenario has improved, but still, some attendees create noise and hamper the meeting flow because of their insufficient IT skills.

Less Collaboration among Meeting Attendees: In virtual meetings, there is no physical interaction among the meeting attendees and this

reduces the chances of fruitful collaboration between them. Social networking does not develop in the true sense of online meetings and gatherings.

Inactiveness and inattentiveness: Inactiveness and inattentiveness are other setbacks of the virtual meetings which reduce the overall outcome of the meetings. People easily get distracted and get engaged in other activities keeping the video off.

The sudden call for a meeting: Virtual meeting platform has made meetings possible at any time and anywhere. There is trouble associated with it which is senior officials call meeting with very short notice and even on Friday and Saturday. Calling meetings at odd times and on holidays create troubles for many as mentioned by the respondents.

Negative impacts of the Recording System: Online meeting tools come up with meeting recording features so that the points discussed during the meeting can be scrutinized later. These recording features create some negative impacts on some meeting attendees as mentioned by some respondents. According to them, some meeting attendees refrain from raising critical points and some stay apart from giving opinions due to this recording system.

Feeling of isolation: In in-person meetings and gatherings, people get the opportunity to meet their colleagues physically and have real-time conversations. In the case of virtual meetings, this type of real-time communication is not possible and this creates a feeling of isolation among the attendees. According to the respondents, repeated virtual meetings are not good for their mental health as they feel isolated.

Interrupted Power supply: Most public offices are not equipped with generators and IPS, so they face trouble when there is a power outage during a virtual meeting. The power outage scenario is more common in the Upazila level offices and they are the worst victim of it as per the opinion of the respondents.

Ineffective alternative to in-person meetings in some cases: About 13.63% of respondents believe that in some cases virtual meetings can be an alternative to in-person meetings, but not in all cases. Some cases demand decisions to be taken through in-person discussions. According to them, virtual meetings can never fully replace in-person meetings.

DISCUSSION

Virtual meetings were chosen as a substitute for in-person meetings at the beginning of the COVID-19 outbreak. However, it is observed that this new normal form of meeting has reduced our time, cost, and visit and can be a useful tool to combat global warming. This research aimed to study the overall performance of virtual meetings in the district and Upazila-level public offices in Bangladesh and to find out if virtual meetings can successfully continue serving meeting purposes in public offices. A total of 45 respondents posted in the public offices of 24 districts have pointed out several positive and negative aspects of virtual meetings in this survey. According to them considering the positive aspects, virtual meetings can be a good alternative in some cases but not always. A hybrid meeting comprising both in-person and virtual presence can be a good approach where full virtual meetings are not feasible.

Most public offices can successfully host virtual meetings now. A good number of respondents have mentioned the time, cost, and visit reduction by choosing virtual meetings over in-person meetings in their offices. Virtual meetings are very good for assuring immediate response in crisis periods and pandemics. Besides, it is believed by the respondents that, the scope of multitasking during meetings will increase the overall productivity of the officials.

One of the major barriers to hosting virtual meetings successfully is the power and Internet interruptions. The Upazila level offices suffer the most because of these unwanted interruptions. The growing feeling of isolation is another issue addressed by some of the respondents which is not good for the mental health of the officials. They suspect that the continuation of virtual meetings on the regular basis can enhance their feeling of loneliness in them. They suggested not going to virtual meetings all the time. Some in-person meetings can be helpful to build up social networks and help in mental well-being.

To combat global warming and achieve sustainable development, fuel consumption has to be reduced significantly. Again the natural gas reserve of Bangladesh is depleting and fuel price in the international market is rising every day because of the Ukraine-Russia war and other factors. Reducing the dependency on in-person meetings and increasing

virtual meetings can be a very good approach in the current context. The cases where only virtual meetings will not serve the purpose full practice of arranging Hybrid meetings can be a more suitable option.

CONCLUSION

The practice of virtual meetings started as an alternative to face-to-face meetings during the COVID-19 pandemic situation. Still now when the infection rate of COVID-19 rises, the offices arrange more online meetings than traditional in-person meetings. If the Green House Gas (GHG) emissions and other environmental factors are considered, it is time to consider virtual meetings as an appropriate alternative to in-person meetings. Virtual meetings also contribute to the reduction of time, cost, and visits lowering the expenditures of the offices. It is found in this research that the Government offices in all districts of Bangladesh are not equally prepared to replace in-person meetings wholly with virtual alternatives. However, the Practice of virtual and Hybrid meetings can be increased gradually to enjoy the benefits provided by the online platform and prepare the country for the Fourth Industrial Revolution.

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CONFLICT OF INTEREST

There is no conflict of interest.

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