Motivation, Adoption and Impact of Video conferencing, virtual meetings to Organizations in Developing countries: A Literature Review

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Abstract: Digital technologies have changed the way organisations and educational institutions communicate and collaborate. Video conferencing and virtual meetings have become indispensable tools for remote communication, especially following the COVID-19 pandemic, which restricted physical meetings and in-person schooling worldwide. This research explored the motivation, adoption, and impact of video conferencing and virtual meetings in organizations in developing countries. A desk review was done to build on peer reviewed existing knowledge, identify factors for adoption, motivation, impact of digital technologies in the current literature and provide a comprehensive overview of the research topic. The findings revealed that, while video conferencing provided flexibility and is cost savings, challenges like limited infrastructure, financial constraints, internet reliability and digital literacy hinder its full functionality. Improvements in digital infrastructure and increased internet accessibility help to facilitate the adoption of video conferencing and online meetings. The benefit is significant, with improved collaboration, lower travel expenses, and streamlined processes. There is need to emphasize the significance of deliberate investment in technology to foster long-term growth in developing countries.

Keywords: Video conferencing, virtual meetings, motivation, adoption, impact, developing countries

I. INTRODUCTION

Over the last decade, digital technologies have changed the way businesses and educational institutions communicate and collaborate. Video conferencing and virtual meetings have become indispensable tools for remote communication, especially following the COVID-19 pandemic, which restricted physical meetings and in-person schooling worldwide. Developing countries, in particular, have had to quickly adopt these technologies to ensure commercial continuity and educational growth. However, the adoption and effect of these technologies in developing nations are influenced by particular hurdles such as infrastructural deficiencies, digital literacy, and financial constraints.

For many people, communicating virtually has become the norm. Access to experts around the world is now possible due to the dissolution of time and distance constraints brought about by technological advancements. Today's business environment necessitates the usage of virtual communication for at least certain tasks, and many professionals will operate in virtual teams at some point. Although virtual communication offers many advantages, it is not without challenges[1].

Telecommunications firms and the broader ICT sector acknowledge the use of ICT solutions to promote sustainability and provide business value through cost savings and increased value for personnel. Organizations and Businesses can profit from video conferencing (VC), which can drastically cut down on staff travel. However, adoption of virtual programs requires a change in organizational management strategies as much as it requires the necessary improvements in ICT. [2].

While many of us were already familiar with using Twitter, Facebook, and other social medial platforms to communicate on both professional and personal topics, most of us have now added video conferencing platforms to our lives [3].

Some of the largest VC platforms in the market include Zoom, Adobe Connect, Cisco WebEx, Skype, Google Hangouts, Microsoft Teams and WhatsApp. Key features of a video conferencing platforms are audio and video sharing, screen sharing, virtual hand raising, small group discussion breakouts, chat, crowd-sourced questions, annotation [4]. Many have commented that virtual communications will be here to stay in one form or another.[3]. Although face-to-face or in-person conferences are quickly shifting online, these remote meetings might not offer the same prospects as those held in person. Virtual meetings need to be modified to boost delegate participation and excitement if they are to continue to facilitate productive networking and communication between researchers and stakeholders. Online conferences started off as a simple email-based event, and due to the COVID-19 pandemic, has rapidly become more common and integral to scientific communication [5].

The paper investigated the motivations behind the adoption of video conferencing and virtual meetings in organizations in developing countries, as well as their subsequent impact on these sectors.

II. RELATED STUDIES

Video conferencing is a useful tool for holding in-person meetings with individuals who live across the globe. The Oxford Dictionary explains video conferences as "meetings in which persons from diverse locations communicate via voice and video". Originally, video conferencing was only used a decade ago to cut down on unnecessary business travel, saving time and money on lodging. Video conferencing platforms play a vital role in various areas, such as, health, education, conferences, business [6].

A basic aspect of our lives is human-to-human connection, underscoring the profound influence that interpersonal relationships have on our interactions and manner of living. Technology has become an essential part of education, changing how knowledge is imparted and acquired. As a result of this technological integration, online learning has emerged as a revolutionary method in education, offering students unmatched access to a multitude of learning opportunities and materials [6].

Adoption of video conferencing and virtual meetings in developing countries is largely motivated by the desire for cost saving and operational flexibility.

A. *Motivation*
The COVID-19 pandemic compelled Organizations and Universities in developing countries to use remote communication techniques to stay operational. Lockdowns, travel restrictions, and the need for social distancing forced the transition to virtual platforms. The urgency of the pandemic fueled the rapid adoption of video conferencing solutions, as Organizations and Universities attempted to minimize disruptions to business and learning activities.

Following the experience of online conferences, it is now evident that global meetings may be held virtually without sacrificing the quality of scientific discussion. Multimedia elements, such as video presentations, enhance some of the presentations, like the online posters. Furthermore, the online events have proven to be more accessible, providing the opportunity for a greater number of researchers across the globe to attend at affordable prices and with minimal carbon footprint.[7]

Virtual meetings have bridged the gap between developing countries and the rest of the globe, allowing people to attend worldwide conferences, research collaborations, and business negotiations without paying significant travel expenses. This has improved their visibility and integration into the global economy and academic landscape.

B. *Adoption*
Video conferencing technology have been adopted unevenly in developing countries, due to factors such as technological infrastructure, government policy, financial constraints and digital literacy levels.

The availability and quality of technological infrastructure, particularly internet connectivity, is a critical factor in the adoption of video conferencing in developing countries. While some urban locations have excellent internet connectivity, many rural areas have limited bandwidth, which reduces the quality and accessibility of virtual meetings. The entire administrative system, from the provincial to the national levels, is impacted by the waves of digital technologies (DT), which are accompanied by changes in various organizational components. Flexibility grows as DT advances and it can be enabled by technology or policy. Different types of flexibility, including organizational and infrastructure flexibility, are required in response to different types of transition in order to facilitate adaptations. The concept of flexibility refers to an organization's ability to efficiently respond to a changing environment [8].

Digital literacy, or the capacity to properly use digital tools, has a significant impact on video conferencing uptake in developing countries. While many organizations in urban areas have embraced digital technology, a large segment of the population, particularly in rural areas, lacks the skills and experience to use these platforms. Addressing the digital literacy gap is critical for the successful adoption and use of video conferencing in both educational and business settings.

C.   *Impact*

The literature is generally extensive and includes works that have highlighted the potential advantages of using virtual platforms to conduct support groups. These works suggest that virtual platforms are helpful and may allow for participants who would not otherwise access support in a live format to participate in such groups [9]. Since VC is now easily accessible on a desktop, small and medium-sized businesses and remote workers are finding the technology to be feasible. Applications for VC include telecommuting, eHealth, remote equipment failure detection, instruction and training of distant workers, and internal company communications. As noted, it can potentially eliminate certain travel requirements, thereby reducing travel expenses.[2].

III.   METHODS

A desk review of existing literature was conducted to understand the motivation, adoption and impact of video conferencing, virtual meetings to organizations in developing countries. The literature sources include academic journals of peer-reviewed articles on digital transformation, e-learning, remote work, video conferencing, virtual meetings and communication technologies in developing countries. The keywords used were video conferencing, virtual meetings, motivation, adoption, impact, developing countries.

IV.   FINDINGS

Video conferencing has transformed the way Organizations in developing counties communicate. Remote teams may now collaborate in real time, regardless of location, which improves coordination, efficiency, reduces costs associated with travel and accommodation. Universities can engage guest speakers, researchers, and overseas faculty virtually, increasing students' academic experiences. Furthermore, virtual meetings have made it easier for organisations to conduct regular updates, check-ins, and project discussions without the need for physical travel.

The transition to online education, facilitated by video conferencing capabilities, has enabled educational institutions in developing countries can continue to provide academic programs even during emergencies like the COVID-19 pandemic.

V.   DISCUSSION

Organizing a physical or face-to-face meeting presents numerous challenges, including determining an appropriate time when all members can be physically present, delay in the start of the meeting, and the expenses of physical meetings, such as the cost of the reception, the cost of renting a meeting room, printing the agenda and minutes for all attendees.

When planning for virtual events, it has been shown that time zone differences must be carefully taken into account. This can be problematic for some participants because it can be difficult to maintain focus on the screen for extended periods of time in the early or late hours of the day. Given how simple it is to exit the virtual world with a single "click," the digital environment also needs to be visually appealing and interactive [5].

Attending a scientific conference has historically been a highly significant professional and exciting personal event. However, the community is currently questioning this format. Apart from the large footprint associated with the international flights, most international conferences remain scarcely accessible to a wide set of researchers, including persons with disabilities and those with limited resources or having caring and family commitments.[7].

Organizations that use Video Conferencing and Virtual Meetings can convene virtually and hold meetings, save time by allowing teams to join the meeting from anywhere in the shortest time, share files without using a single piece of paper, and have the meeting fully recorded and saved.

While these personal interactions cannot be substituted, online conferences provide a unique opportunity to complement traditional conference formats while upholding the benefits of presenting and receiving feedback, keeping up with cutting-edge research, sharing research insights, and having the opportunity to be exposed to inspiring ideas and people, as well as maintaining the sense of community.[5].

Institutions that used systems such as Zoom, Microsoft Teams, and Google Meet were able to continue conducting lessons, exams, and seminars with minimum disturbance to the academic calendar. However, this move has emphasized the digital divide, with students from rural or low-income areas sometimes unable to attend online classes due to a lack of internet connection or digital equipment.

Another obstacle to digital transformation adoption in small service business is the absence of digital capability such as, digital marketing, digital skill. Lack of digital capabilities could be caused by limited capital resources. Lack of funding restricts small businesses from adopting new technologies and prevents top management and employees from updating their skills [10].

In developing countries where budget constraints frequently limit travel and infrastructure development, video conferencing provides a cost-effective alternative to traditional face-to-face meetings. Video conferencing has helped organizations enhance productivity by eliminating travel time and meeting logistics.

Employees can attend many virtual meetings in a same day, providing for more flexible scheduling and time management. The ability to hold meetings and seminars remotely dramatically decreases costs associated with travel, accommodation, and physical venue needs. This has proven especially advantageous for institutions and enterprises with limited financial resources, allowing them to relocate funds to other critical areas.

VI. LIMITATIONS

Despite its numerous advantages, the use of video conferencing in developing countries faces several challenges. Internet infrastructure remains a limitation, with many rural locations experiencing unreliable connectivity, resulting in poor video quality and dropped calls. Many users find data costs prohibitively high, limiting their ability to participate in extended video conferencing sessions.

Power shortages is another important factor in many developing countries, making it difficult for participants to count on uninterrupted virtual meetings. Furthermore, virtual fatigue, or burnout from prolonged use of video conferencing, has surfaced as a worry, particularly in academic contexts where students and teachers may spend lengthy hours on virtual platforms.

VII. CONCLUSION

The use of video conferencing and virtual meetings have transformed Organizations in developing countries. It has improved communication, collaboration, and efficiency, while also providing access to global opportunities and minimising operational costs. However, the challenges posed by inadequate infrastructure, digital literacy gaps, internet reliability and high data costs must be addressed to fully realize the potential of these technologies.

As developing countries increasingly incorporate video conferencing into their organisational and educational operations; governments, organizations, and educational institutions must collaborate to improve infrastructure, promote digital literacy, and develop policies that support digital transformation. By doing so, organizations can guarantee that the benefits of video conferencing are accessible to everyone, fostering increased innovation, collaboration, and growth in these regions.

The study highlighted the key motivations, adoption patterns, and impacts of video conferencing and virtual meetings in developing countries, emphasizing the opportunities and challenges these technologies present in organizational and educational contexts.

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