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IMPACT OF VIDEO CONFERENCING PLATFORM IN EDUCATIONAL SECTOR AMIDST COVID-19 PANDEMIC

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ABSTRACT

The COVID-19 crisis has resulted in India going to an unprecedented nationwide lock down from the month of March 2020. The effect of pandemic is being felt across all aspects of economy with multiple agencies such as Moody's expecting a GDP growth to fall to as slow 2.5% in this calendar year (India may escape a recession, but corona virus will slow down growth further, Quartz, Pramod Mathew , March 30 2020). The academic sector also affected a lot ,by the sudden close down for following COVID protocol. The scope for traditional face to face learning to get challenged. e-learning became the only solution .Most of the higher education institutions adapted to synchronized mode of learning using video conferencing platforms. Some are also depended asynchronised mode as well. Use of videoconferencing platform is not limited to regular classes, WEBINARs(web based seminar)are also utilizing these facilities and also a plenty of workshops, colloquium, certificate courses involving foreign resource persons and participants are there. Even many universities used this platform for open defense session for M Phil/PhD .In the growth of videoconferencing industry in COVID period,the contribution from academic sector is commendable . Conceding the merit of the platform even then the acceptability ,technicality, security, network glitches, digital literacy, accessibility, affordability ,comfortness and the consumer preference ..want to closely analyzed .This paper trying to critically analyze the impact of videoconferencing platform in academic sector special attention to higher education .

Key Words: *Education System, Covid-19*

COVID-19 Pandemic: Impact and strategies for education sector

Sometime in the second week of March, state governments across the country began shutting down schools and colleges temporarily as a measure to contain the spread of the novel corona virus. It's close to a month and there is no certainty when they will reopen. This is a crucial time for the education sector—board examinations, nursery school admissions, entrance tests of various universities and competitive examinations, among others, are all held during this period. As the days pass by with no immediate solution

to stop the outbreak of Covid-19, school and university closures will not only have a short-term impact on the continuity of learning for more than 285 million young learners in India but also engender far-reaching economic and societal consequences. The structure of schooling and learning, including teaching and assessment methodologies, was the first to be affected by these closures. Only a handful of private schools could adopt online teaching methods. Their low-income private and government school counterparts, on the other hand, have completely shut down for not having access to e-learning solutions. The students, in addition to the missed opportunities for learning, no longer have access to healthy meals during this time and are subject to economic and social stress.

The pandemic has significantly disrupted the higher education sector as well, which is a critical determinant of a country's economic future. A large number of Indian students—second only to China—enroll in universities abroad, especially in countries worst affected by the pandemic, the US, UK, Australia and China. Many such students have now been barred from leaving these countries. If the situation persists, in the long run, a decline in the demand for international higher education is expected.

In this time of crisis, a well-rounded and effective educational practice is what is needed for the capacity-building of young minds. It will develop skills that will drive their employability, productivity, health, and well-being in the decades to come, and ensure the overall progress of India.

How is the education sector responding to COVID-19?

In response to significant demand, many online learning platforms are offering free access to their services, including platforms like BYJU'S, a Bangalore-based educational technology and online tutoring firm founded in 2011, which is now the world's most highly valued edtech¹ company. Since announcing free live classes on its Think and Learn app, BYJU's has seen a 200% increase in the number of new students using its product, according to Mrinal Mohit, the company's Chief Operating Officer. Tencent classroom, meanwhile, has been used extensively since mid-February after the Chinese government instructed a quarter of a billion full-time students to resume their studies through online platforms. This resulted in the largest "online movement" in the history of education with approximately 730,000, or 81% of K-12 students, attending classes via the Tencent K-12 Online School in Wuhan.

Alibaba's distance learning solution, Ding Talk, had to prepare for a similar influx: "To support large-scale remote work, the platform tapped Alibaba Cloud to deploy more than 100,000 new cloud servers in just two hours last month – setting a new record for rapid capacity expansion," according to DingTalk(3)CEO, Chen Hang.

Some school districts are forming unique partnerships, like the one between The Los Angeles Unified School District and PBS SoCal/KCET to offer local educational broadcasts, with separate channels focused on different ages, and a range of digital options. Media organizations such as the BBC are also powering virtual learning; Bitesize Daily, launched on 20 April, is offering 14 weeks of curriculum-based learning for kids across the UK

with celebrities like Manchester City footballer Sergio Aguero teaching some of the content.

Is learning online as effective?

For those who do have access to the right technology, there is evidence that learning online can be more effective in a number of ways. Some research shows that on average, students retain 25-60% more material when learning online compared to only 8-10% in a classroom. This is mostly due to the students being able to learn faster online; e-learning requires 40-60% less time to learn than in a traditional classroom setting because students can learn at their own pace, going back and re-reading, skipping, or accelerating through concepts as they choose. Nevertheless, the effectiveness of online learning varies amongst age groups. The general consensus on children, especially younger ones, is that a structured environment is required, because kids are more easily distracted. To get the full benefit of online learning, there needs to be a concerted effort to provide this structure and go beyond replicating a physical class/lecture through video capabilities, instead, using a range of collaboration tools and engagement methods that promote “inclusion, personalization and intelligence”, according to Dowson Tong, Senior Executive Vice President of Tencent and President of its Cloud and Smart Industries Group. Since studies have shown that children extensively use their senses to learn, making learning fun and effective through use of technology is crucial, according to BYJU's Minamoto. “Over a period, we have observed that clever integration of games has demonstrated higher engagement and increased motivation towards learning especially among younger students, making them truly fall in love with learning”, he says.

A changing education imperative

It is clear that this pandemic has utterly disrupted an education system that many assert was already losing its relevance. In his book, *21 Lessons for the 21st Century* (7), scholar Yuval Noah Harari outlines how schools continue to focus on traditional academic skills and rote learning, rather than on skills such as critical thinking and adaptability, which will be more important for success in the future. Could the move to online learning be the catalyst to create a new, more effective method of educating students? While some worry that the hasty nature of the transition online may have hindered this goal, others plan to make e-learning part of their ‘new normal’ after experiencing the benefits first-hand.

The importance of disseminating knowledge is highlighted through COVID-19

Major world events are often an inflection point for rapid innovation – a clear example is the rise of e-commerce post-SARS. While we have yet to see whether this will apply to e-learning post-COVID-19, it is one of the few sectors where investment has not dried up. What has been made clear through this pandemic is the importance of disseminating knowledge across borders, companies, and all parts of society.

If online learning technology can play a role here, it is incumbent upon all of us to explore its full potential.

Developing ICT skills to ensure education weathers the storm of future crises

Reports of parents, teachers, communities and networks that have developed innovative) and makeshift interventions, such as mobile-based Wi-Fi networks as well as on-demand content and textbooks available in clouds -- to broaden digital capacities have certainly sparked optimism. However, these grassroots

efforts largely serve as a short-term Band-Aid solution. Although they are inspiring, more fundamental developments to bolster access to and use of ICT(8) are required – both at home and in schools, and especially for younger learners at the primary and secondary levels where gaps are largest. Hastily put-together remote teaching approaches have not proven to be optimal learning experiences and could be off-putting to some students. School closures such as those currently experienced by the more than 1.5 billion students worldwide are commonplace in some countries due to natural emergencies, conflict as well as budgetary or labor negotiations. Once schools reopen, building skills and support for distance education in schools so learners can continue learning in the home can help minimize learning interruptions as well as deter learners from leaving school early or dropping out in the event of future crises. In addition, there remains a possibility that the COVID-19 crisis and its ensuing confinement measures may not be short-lived as flare-ups of cases may spark future school closures in certain countries.

Bridging the digital divide at home and in schools

Evidence indicates that there is a substantial ‘digital divide’ in access to ICT between countries

. Video Conferencing Tool

Though the current school year is still in its beginning stages and more COVID-19 motivated changes will certainly occur, it’s now obvious in education — as well as business, health care, and our personal lives — that one particular tool has become the go-to pandemic solution: video conferencing.

Video conferencing isn’t new. It’s been around in some form since AT&T introduced its Picture phone at the 1964 World’s Fair. And since then, it has morphed into what we know today as Zoom, Google Meet, Skype, and others. Since the early days of video conferencing, education has attempted to put it to good use for a range of distance learning and training solutions. And though it may work okay for static instructor-led lectures and courses, it can’t capture many of the critical elements that take place in high-functioning classrooms. “Good enough” may suffice while education remains in its pandemic-induced punt mode and tries to figure out how best to do virtual learning. But there are real opportunities for video conferencing to improve and better support effective classroom instruction. And moreover, to provide both teachers and students with resources they don’t have in physical classrooms.

The Covid-19 pandemic sweeping across the globe has brought normal life to a standstill. Even with the partial lifting of prolonged lockdowns in India, a number of restrictions remain in place. Meanwhile, norms of social distancing at workplaces have become necessary. Across the globe, governments, businesses and institutions have adjusted to a new normal of “working from home”. In the prevailing scenario, digital video and data connectivity has provided essential workplace solutions, with almost all institutions resorting to digital platforms for their routine functioning. Seeing the continuing spread of the pandemic, this situation is unlikely to change anytime soon. Video conferencing platforms are providing a sense of ‘alone together’, boosting social and professional solidarity. There are several global video conference platforms vying with each other to capture this business space; virtually all of them, including Microsoft Teams, GoToMeeting, WebEx, Google Meet etc. have

experienced an exponential surge in their exploitation. Among all these platforms, Zoom has emerged as the most popular, mainly because of its user-friendly features. In 2020 alone, Zoom has added 2.2 million new users each month, outstripping its entire 2019 new user base of 1.19million. Zoom has surpassed its revenue guidance as well as analysts' forecasts, reporting year-on-year growth of 169 percent in its April, 2020 quarterly revenue to \$328.2 million from \$122 million a year-ago.

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Security Issues with Video Conferencing Platforms

The security flaws which have been pointed out are not necessarily limited to Zoom; most video conferencing platforms have the following common flaws:

- Not using meeting codes with passwords to prevent intrusion, which leads to breaches like ‘zoom bombing’ or the hijack of meetings.
- Attackers joining meetings uninvited; sending malicious links in chat to extract information; and shared content being stolen using third parties.
- Lack of end-to-end encryption to preserve privacy of meetings. Normally AES-256 (9) encryption is implemented to keep sensitive information shared during video calls secure. For corporate customers, the issue of encryption is especially important, be it to safeguard valuable company information or to meet privacy obligations to customers.

Indian Initiatives

The security and privacy flaws which have been highlighted in these platforms during the Covid-19 pandemic have given rise to consideration of national video conferencing solutions. Threatening or obscene calls. In April, 2020 the Indian Computer Emergency Response Team (CERT-IN) issued advisories that multiple vulnerabilities have been reported in video conferencing applications which could allow an attacker to obtain sensitive information on the targeted system. This followed media reports that 500,000 Zoom accounts had been sold on the dark web anonymously. Around the same time, an advisory was also issued by the Union Home Ministry asking government officials not to use this application and advising all users to take certain precautions. Based on these developments, a writ petition was filed before the Supreme Court of India on May 20, 2020 seeking a ban on the use of the Zoom video conferencing application by Indian citizens, claiming that it breaches privacy. The petition stated that Zoom does not have end-to-end encryption and is violating the Information Technology Act, 2000 and the Information Technology (Procedure and Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009. It called for legislation to be put in place in order to effectuate a standard regulation to safeguard the rights of citizens.

Indian Start-Ups

Besides these government platforms, several start-ups are independently developing viable Indian alternatives for corporates to choose from, depending on their reliability. These also need to be encouraged and incentivized. One of these is 'Say Namaste', developed by Mumbai based start-up Inscript. On June 08,2020 it was reported that the 'Say Namaste' video conference platform, fully developed in India, is now available on both the Google Play Store as well as Apple Store. Earlier, it was available only on the browser Google Chrome. This app comes with features such as screensharing, text mode and file sharing, similar to Zoom and other video platforms. The app is just 23 MB in size and currently has more than 100,000 downloads on the Google Play Store. It supports up to 50 participants. Onboth the Google Play Store and the Apple Store, the app is listed with 4.5 stars. Another such platform is 'Bharat.Live', which claims to integrate privacy and security. It is a browser-based application, with secure log-in and password. The site does not ask for email ID; no chat or records are stored on servers as of now. The trusted cryptographic standards like AES 256 -bit encryption and TLS (Transport Security Layer) SSL encryption are in place to increase network security. This platform is Health Insurance Portability and Accountability Act (HIPAA) compliant and conforms to General Data Protection Regulation (GDPR) safeguards, enhancing its acceptability in the global market. It claims secure user authentication, proper information storage and reports generation with access control, audit controls,integrity controls and transmission security. The third such Indian platform is 'AIRMEET', which is an online meeting and event hosting platform where instead of simply broadcasting the event, participants can connect with other event attendees for one-to-one and one-to-many online interactions. 'AIRMEET'(10)is scalable and offers options such as virtual tables, networking lounges, backstage, stage, claps and audience reactions to participants, to recreate a live atmosphere online. This Bengaluru-based virtual meet-up start-up, founded in 2019, has recently announced that it has raised \$3 million in funding.

TOP VIDEO CONFERENCING APPS OF 2020

Video conferencing apps have played a pivotal during the lockdown phase. Not only have they helped the world connect, but they also helped transform the work and education sector across the globe.

What has helped video conferencing apps grow exponentially during this period is the fact that they have provided their services for free to their customers with an option to upgrade for premium features. Even smartphones users on Android and iOS have been able to avail these services and that's what has caused the boom.

The ubiquitous influence of virtual classrooms and remote workplaces gave the push to the industries and educational institutions to deploy these video conferencing solutions. Since these apps will be in use for a longer period are they here to stay, here's a look at the top 5 free video conferencing apps you should definitely look outfor.

Zoom

What has been the go-to video conferencing app of 2020, Zoom shot to fame ever since the lockdown kicked in. The app is available for download for free on Android, iOS and Microsoft but you can always upgrade your app to avail the premium services that Zoom offers. The app has been able to garner more than 300 million users over the course of the past couple of months and is one of the most-used apps today.

With the free version of the app, users get 40-minutes of uninterrupted video calling with an option to record the call. The company introduced paid subscription models for the app in October with the annual plans starting from Rs 13,200 all the way up to Rs 17,700.

The paid version of the app offers features like a maximum of 100 participants, unlimited group meetings, social media streaming and 1GB cloud recording (per account).

What makes Zoom an attractive proposition is the interface is relatively simple to use and it also offers different backgrounds and audio enhancement features.

Microsoft Teams

Microsoft Teams is the first name that comes to your mind when one is talking about a video conferencing solution for an organisation. Since the platform is closely integrated with the rest of Microsoft's suite of apps users do not have any trouble sharing work on the platform during meetings. In terms of subscription plans, Microsoft offers its Microsoft 365 Business Basic subscription for Rs 125 per month where you also get Teams loaded with other Microsoft apps. The Business Standard plan costs Rs 660 while the complete Office 365 E3 plan costs Rs 1,320 per month. With Teams, you get the ability to host up to 250 members with screen sharing and call recording bundled. You can also connect it to the calendar which can help you schedule meetings in advance. In comparison to its competitors, it also offers an extensive array of exclusive features like Calls and Activity among others.

Skype

Before Zoom, Teams and other video apps, people usually turned to Skype as the default video conferencing app. What was a surprise for many is that Skype did not advertise itself more aggressively during the lockdown which is where it lost out on a userbase that found Zoom and Teams as a better option. Initially, the app was created to make voice calls over the internet but later introduced a video conference feature. It is compatible with Windows, Mac, Android and iOS operating systems. The app can support up to 50 participants in a single call and also offers other features like screen sharing and also sharing documents. It also integrates other Microsoft apps like Word, OneDrive and Outlook as well.

The paid version of the Microsoft-owned platform is available for a starting price of Rs 147 per month.

Google Meet

Google Meet earlier known as Google Hangouts Meets is Google's challenger in the video conferencing space. The app is available in Android and iOS devices and can also be accessed on the Chrome browser. Like its competitors, it also presents its participants in a tiled format with up to 16 participants in a single window. It supports 2-step verification for security and also offers screen sharing and real-time captions to its users.

Since Meets is an integral part of the Google Ecosystem, the search giant has been pushing its video conferencing platform a lot. The best part about Meet is that it offers a minimum 60-minute limit for free and can accommodate Online education is not so easy as speaking into the microphone at one end, and connecting a laptop and listening in on the other; there are challenges faced at both ends of the spectrum. Covid-19 has forced universities across India, and the world indeed, to suspend physical classrooms and shift to online classes. In India, while this transition has been smooth for most private universities, the public ones are still adapting. There have also been debates on the nature of classes, and the future of examination and evaluation — whether they could be conducted online or not. The Supreme Court has issued a notice to the Government on May 22, 2020 on the writ petition. The next hearing is tentatively scheduled for July 7, 2020. The government has shortlisted ten companies, among them HCL Technologies, Zoho Corp and People Link. These companies will receive INR 5 Lakhs (\$6618) each from the government to develop a prototype of a product similar to global counterparts. Meanwhile, the government is also separately developing its own secure video-conferencing platform. The responsibility to develop a platform for use by government officials, the judiciary and the public has been entrusted to the Centre for Development of Telematics (C-DoT). [4] C-DoT's video conferencing platform will expand on all features of overseas rivals like Zoom and Microsoft Teams and is said to be almost ready for deployment. Thus far, the National Informatics Centre (NIC) has been providing video conferencing services to the government since 1995.

CONCLUSION

The sudden pandemic situation made a three sixty degree revolution in academic sector. From traditional face to face learning to completely switch to online mode. It was really a shock to 'keralites', even though they are familiar to technology, a complete shift was a question. Considering malappuram district, the sample of our study being financially developed comparatively with other districts, the digitalization is not full fledged. But it was the only one which kept the rhythm of our academic year especially in higher education. Time is so crucial for student in higher education because it has long time effect. So all higher education institutions without difference of discipline relayed online education by the support of videoconferencing application too.

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