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Evolution to Online Education around the globe during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic: Do develop and underdeveloped cope alike?

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Keywords: COVID-19; Lockdown; satisfaction; online learning; access and use differences
Educational institutes worldwide are facing closure owing to SARS-CoV-2 pandemic.
Online mode of learning is adopted by institutes worldwide.
We compared access & use of online learning among Bruneians and Pakistanis
Bruneian are more satisfied with online learning as compared to Pakistanis.
Conventional to Online Education during SARS-CoV-2 Coronavirus (COVID-19)

Pandemic: Do develop and underdeveloped nations cope alike?

Abstract

Background: Educational institutes around the globe in this 21st century is facing challenges of SARS-CoV-2 Coronavirus infectious disease. They are required to conduct online learning to avoid face to face contact in emergency scenarios such as COVID-19 pandemic and continuing academic year while keeping social distancing. Students need to adapt to new roles of learning through information technology to succeed in academics amid COVID-19.

Objective: However, access to the impact of access & use of online learning resources, to what extent, these students are satisfied with online learning amid COVID-19 particularly in handling new challenges are critical to explore. Therefore, in this paper, we aimed to assess and compare the access & use of online learning of Bruneians and Pakistanis amid enforced lockdown imposed by the governments using a five-items satisfaction scale underlying existing literature. Method: For this, a cross-sectional study was done in the first half of June 2020 after the pandemic situation among 320 students’ across Pakistan and Brunei and strata with a pre-defined questionnaire. Data were analyzed with statistical software package SPSS 2.0.

Results: The finding showed that there is a relationship between students’ satisfaction and access & use of online learning. Outcomes of the survey suggest that Bruneian are more
satisfied (50%) with the use of online learning amid lockdown as compared to Pakistanis (35.9%). Living in the Urban area as compared to a rural area is also a major factor contributing to satisfaction with the access and use of online learning for both Bruneian and Pakistanis. Moreover, previous experience with the use of online learning is observed prevalent among Bruneians ($P=.000$), while among friends and family is using online learning ($P=.000$) were encouraging factors contributed to satisfaction with the use of online learning among Pakistanis amid COVID-19. Correlation results suggest that access and use factors of online learning amid COVID-19 were positively associated with satisfaction among both populations amid the COVID-19 pandemic. However, Bruneian is more satisfied with Internet access ($r=.437$, $P<.000$) and affordability of gadgets ($r=.577$, $P<.000$) as compared to Pakistanis ($r=.176$, $P<.050$) and ($r=.156$, $P<.050$).

**Conclusion:** The study suggested that it is crucial for the government and other policymakers worldwide to address access and use of online learning resources of their populace amid pandemic. Implications and future recommendation were discussed.

**Keywords:** COVID-19; Lockdown; satisfaction; online learning; access and use differences

1- **Introduction**

The novel coronavirus disease (COVID-19) first appeared in Wuhan city of China at the end of last year and the World Health Organization (WHO) has declared it as ‘pandemic’ on 11 March 2020 (WHO, 2020; Pelmin, 2020). Most of the governments around the world have initiated a common goal to curb the spread of this highly contagious disease by imposing
lockdown, social/physical distancing, avoiding face-to-face teaching-learning, and restrictions on immigration (Gonzalez et al. 2020). Pakistan reported the first COVID-19 case from Karachi and currently, the country is facing a COVID-19 spike. The Government of Pakistan has initiated many strategies to contain the viral transmission, and nationwide educational institutions have been shut down as the preliminary prevention step. This closure has led to an unprecedented impact on students, as the students and teachers are being urged to switch from conventional teaching to online learning sources [1, 2]. COVID-19 outbreak has led to a digital revolution in education via the use of online lectures, digital books, teleconferences, and virtual classrooms [3-5].

However, online learning is primarily discriminatory against poor students, who cannot afford the necessary gadgets and devices for online education. In the underdeveloped and developing nations, many students cannot afford a reliable internet connection or the necessary gadgets needed for online connectivity and therefore are marginalized. The COVID-19 lockdown has significantly hampered the teaching-learning process by the use of online modules. It is imperative to thoroughly understand the teaching-learning process, to take the necessary steps to smoothly run the two-way process [3]. This study, therefore, aims to identify learning status, learning modules, and issues that are being faced by the students during the pandemic.

The use of technology is important because it is often found to be positively correlated with satisfaction[6]. To the best of our knowledge, this is the very first study in accessing the student
satisfaction with the use of online learning resources amid COVID-19. We used well-established literature for the development of satisfaction scale and explored the students’ satisfaction amid COVID-19 with online learning.

2- Method

2.1 Data collection and procedure

A cross-sectional study was done in the first half of June 2020 after the pandemic situation among 330 students’ across Pakistan and Brunei and strata with a pre-defined questionnaire. A structural questionnaire link using ‘Google form’ was sent to students’ through WhatsApp and Facebook groups. The informed consent was fully provided to participants before participation in the online survey.

2.2 Data analysis

Data were analyzed with statistical software package SPSS 2.0. Both (1) Descriptive statistics and inferential statistics were carried out to understand the distribution of study participants and the impact of preparedness on satisfaction with online learning during the COVID-19 pandemic. The opinion on educational decisions and problems related to study due to the lockdown was also recorded and analyzed using a sentiment analysis approach.

To assess which items predicted the outcome of satisfaction, logistic regression analyses were performed for students' demographics information. For this, Univariate analysis and Multivariate logistic regression analyses are used. The sample characteristic and satisfaction
level amid COVID-19 was explored by Univariate analysis. Further, multivariate logistic regression was performed to estimate the strengths of associations demonstrated by the odds ratio (OR) with a 95% confidence interval (CI). Spearman’s correlation coefficient, $r$, was used [7] to evaluate the association between preparedness and satisfaction with online learning resources amid COVID-19. The p-value $p<0.05$ was considered statistically significant.

2.3 Instrument design

The questionnaire is consistent with the following sections. Introduction, demographics (gender, education level, Residence status, I was used to attending an online learning system before the outbreak of COVID-19. My friends and family are using online learning during COVID-19, Mode of online classes at lockdown-nil/Zoom app/Youtube live/Skype/Google Meet/Team Link/Audio materials, or other.

Use & access to online learning (5 items), I have reliable Internet support, Online class attended gadgets are-affordable to me, I can use online learning resources to save my academic year while practicing social distancing amid COVID-19, I have access to online learning resources during COVID-19. To evaluate the access & use regarding online system amid COVID-19 the questions were posed underlying published studies from influenza H1N1/A, and pandemic COVID-19 [3, 8-10].

Moreover, the participants responded to the 5-item of satisfaction with the use of online learning amid COVID-19. The measurement of satisfaction is commonly done through either an aggregate (single-item) or attribute (multi-item) level of measurement [11]. The satisfaction items were developed under published literature from COVID-19 pandemic, related literature on satisfaction, and some items are taken from a well-established student satisfaction scale [3, 6, 12, 13]. Using the online learning makes me feel satisfied, I’m satisfied with educational
progression, I’m satisfied with the course content delivered by the teacher using online mode, I think I can complete the syllabus amid COVID-19 pandemic, I feel the policy of online learning to avoid COVID-19 is a good move, I like the way things are going for me. Respondents were asked to rate ranging from 0 (low) to 3 (high). The demographic section 1 of the survey included scores yes (1) and no (0) responses.

2.4 Ethical consideration

All participants voluntarily gave consent for participation in the survey. Since participants were kept anonymous, no formal ethical approval was needed.

3- Results

a. Satisfaction Level among student’ amid COVID-19 Pandemic

Table 1 shows how the satisfaction level of students was affected to varying degrees amid COVID-19. Of the 320 students, more than 15% of Bruneians have low or moderate low satisfaction, whereas more than 30% of Pakistanis showed signs of low satisfaction with online learning in lock-down amid COVID-19 pandemic. The signs of moderate-high to high were more prevalent among Bruneian (24.6%&31.5%) as compared to Pakistanis (18.4% &17.5%). This result shows that people belonging to economically unstable nations are more unsatisfied with the leaning strategy amid COVID-19. This is because prolonged lockdown will ultimately lead to basic life needs being inaccessible.

Figure 1 presents the demographic characteristics of the respondents. It can be seen that over 70% of the respondents were satisfied with the use of an online learning system amid COVID-19 from Brunei and less than 50% were satisfied with online learning in Pakistan amid COVID-
19. When asked about the mode of online classes at lockdown the results were insignificant for both Brunei and Pakistan. Figure 1 below shows the percentage rations of Gender, education level, and learning mode among Bruneian and Pakistanis Students’.

![Figure 1: Demographic of respondents](image)

**Table 1: Students with different satisfaction level (n = 362)**

| Satisfaction Level | Brunei (n=130) | Pakistan (n=200) |
|--------------------|----------------|------------------|
| Low                | F  | % | F  | % |
| Moderate low       | 21 | 16.2 | 71 | 35.5 |
| Moderate high      | 32 | 24.6 | 36 | 18.4 |
| High               | 41 | 31.5 | 35 | 17.5 |

b. Factors influencing students’ satisfaction amid COVID-19 pandemic
Univariate Analysis

Table 2 presents relationships between demographic factors of students and satisfaction among Bruneians and Pakistanis. The gender was not significant among the Bruneians (P=.133), not with Pakistanis (P=.431). Also, education level as a variable was neither a significant factor among the Bruneians (P=.966) nor the Pakistanis (P=.986). The mode of learning was also insignificant for Bruneians (P=.836) and Pakistanis (.624). However, residence status was significantly linked with the satisfaction of students in both countries e.g. Bruneian (.044) and Pakistan (.037).

The association of satisfaction with the used to attending online learning system before the outbreak of COVID-19 was significant among Bruneian (P=.000) and Pakistan (P=.000). Likewise my friends and family are using online learning to avoid the spread of COVID-19 is a sign associated with satisfaction among Bruneians (P=.000) and Pakistanis (P=.000) respectively. The mode of learning was insignificantly related to satisfaction for Bruneian and Pakistan.

Table 2. Univariate analysis of factors affecting satisfaction among Bruneians and Pakistanis amid COVID-19 pandemic

| Country | Variable | Satisfaction Level | Statistics | P |
|---------|----------|--------------------|------------|---|
|         |          | Low (36.1)         | Mild (31.9) | Moderate (20.8) | High (11.1) |   | a |
|         | Gender   | Female             |            |                |             | 5.6023 | .133 |
|         |          | Male               |            |                |             |   | |
| Brunei  | Gender   | Female             |            |                |             | 22(20.8) | .431 |
|         |          | Male               |            |                |             | 14(14.9) | |
| Pakistan| Learning | Zoom               |            |                |             | 19(34.5) | .053 |
|         | Mode     | MS-Team            |            |                |             | 7(21.9)  | |
|         |          | Google meeting     |            |                |             | 12(34.3) | |
|         |          | Other              |            |                |             | 3(37.5)  | |
| Pakistan | Zoom | 10(19.6) | 13(25.5) | 18(35.3) | 10(19.6) | 7.126\(^b\) | .624 |
|-----------|------|----------|----------|----------|----------|-------------|------|
|          | MS-Team | 8(18.2) | 15(34.1) | 13(29.5) | 8(18.2) |
|          | Google meeting | 17(19.3) | 34(38.6) | 24(27.3) | 13(14.8) |
|          | Other | 1(5.9) | 9(52.9) | 3(17.6) | 4(23.5) |
| Brunei   | Education Level | Postgrad | 34(32.4) | 29(27.6) | 25(23.8) | 17(16.2) |
|          | Undergrad | 7(28.0) | 7(28.0) | 7(28.0) | 4(16.0) | .268\(^a\) | .966 |
| Pakistan | Postgrad | 31(18.3) | 60(5.5) | 49(9.0) | 29(7.2) |
|          | Undergrad | 5(16.1) | 11(35.5) | 9(29.0) | 6(19.4) | .143\(^b\) | .986 |
| Brunei   | Residence Status | Urban | 24(30.4) | 24(30.4) | 14(17.7) | 17(21.5) |
|          | Rural | 17(33.3) | 12(23.5) | 18(35.3) | 4(7.8) | 8.087\(^a\) | .044 |
| Pakistan | Urban | 5(7.40) | 26(38.20) | 22(32.40) | 15(22.10) |
|          | Rural | 2(6.3) | 24(75.0) | 6(18.8) | 0(0.0) | 50.36\(^a\) | .037 |
| Brunei   | Used to online learning before the outbreak of COVID-19 | Yes | 12(12.2) | 26(26.5) | 21(21.4) | 39(39.8) |
|          | No | 2(6.3) | 24(75.0) | 6(18.8) | 0(0.0) | 50.36\(^a\) | .000 |
| Pakistan | Yes | 35(24.6) | 23(16.2) | 49(34.5) | 35(24.6) |
|          | No | 1(1.7) | 48(82.8) | 9(15.5) | 0(0.0) | 82.83\(^b\) | .000 |
| Brunei   | My friends are using online learning to avoid COVID-19 | Yes | 39(50.0) | 14(17.9) | 9(11.5) | 16(20.5) |
|          | No | 2(3.8) | 22(42.3) | 23(44.2) | 5(9.6) | 43.59\(^a\) | .000 |
| Pakistan | Yes | 36(31.0) | 34(29.3) | 18(15.5) | 28(24.1) |
|          | No | 0(0.0) | 37(44.0) | 40(47.6) | 7(8.3) | 53.31\(^b\) | .000 |

### c. Ordinal regression analysis

Table 3 presents the results of the ordinal multivariate analysis of factors associated with online learning satisfaction during the COVID-19 pandemic lockdown. Significance factors from the univariate analysis were included in the ordered logistic regression analysis. In the model test, p<.05, indicating that the OR value of at least one variable was statistically significant.
From the results, residence status at Brunei (OR= 3.201, 95% CI=1.358, 7.457), Pakistan (OR=2.094, 95% CI=1.014,4.324) shows that people at the urban area were more satisfied than rural in both countries. On the other hand, the use of online learning before the outbreak of COVID-19 (OR= 0.344, 95% CI= 10.161, 1.049), and friends and family are using online learning during COVID-19 (OR= 0.405, 95% CI=1.513,7.414) were protective factors for Bruneian during the COVID-19 lockdown. In comparison for Pakistanis used to access online learning before the outbreak of COVID-19 (OR=1.937, 95% CI= 1.070, 3.507) and friends and family are using online learning amid COVID-19(OR= 2.270, 95% CI=1.276,4.038) was also a protective and encouraging factor for Pakistanis. However, the Bruneians significance level is at 0.01, and Pakistanis masses are significant at 0.005 for friends and family are using online learning amid COVID-19. Similarly, used to online lectures before the outbreak of COVID-19 in Bruneian were more frequent as compared to Pakistanis.

Table 3. Ordinal logistic regression analysis of factors influencing satisfaction with online learning among Bruneians and Pakistanis amid COVID-19 pandemic

| Country | Factors | Number | SE  | OR   | P    | OR (95%CI) |
|---------|---------|--------|-----|------|------|------------|
| Brunei  | My friends & relatives are using online learning to avoid COVID-19 | Yes | 100  | 0.405| 3.34 | 0.003 | (1.513, 7.414) |
|         |         | No*   | 30  | -    | -    | -         |           |
| Pakistan |         | Yes | 134 | 0.198| 1.93 | 0.02 | (1.070, 3.507) |
|         |         | No*  | 66  | -    | -    | -         |           |
| Brunei  | Used to online learning before the outbreak of COVID-19 | Yes | 72  | 0.388| 0.34 | 0.006 | (0.161, 1.049) |
|         |         | No*  | 58  | -    | -    | -         |           |
| Pakistan |         | Yes | 62  | 0.293| 2.27 | 0.005 | (1.276, 4.038) |
|         |         | No*  | 138 | -    | -    | -         |           |
| Brunei  | Residence status | Urban | 92  | 0.437| 3.20 | 0.008 | (1.358, 7.457) |
|         |         | Rural| 38  | -    | -    | -         |           |
| Pakistan |         | Urban| 117 | 0.370| 2.09 | 0.004 | (1.014, 4.324) |
d. Correlation analysis between the use of online learning systems/resources and students’ satisfaction amid the COVID-19 pandemic

Table 4 shows correlation analysis between access and use factors of online learning and satisfaction amid COVID-19 among Bruneians and Pakistanis. All evaluated access & use factors are significantly linked with online learning satisfaction among Bruneians and Pakistanis. Correlation analysis shows that Bruneians are more satisfied with reliable Internet support (r=.437, P<.001) and affordability to access gadgets (r=.577, P<.001). Moreover, I can use online learning resources to save my academic year while practicing social distancing amid COVID-19 (r=.481, P<.001) and I have access to online learning resources during COVID (r=.485, P<.001) is significant at <.001 for Bruneians.

On the other hand, Pakistanis are less satisfied with reliable Internet support (r=.176, P<.050) and affordability to access gadgets (r=.152, P<.050). Subsequently, I can use online learning resources to save my academic year while practicing social distancing amid COVID-19 (r=.447, P<.001) and I have access to online learning resources during COVID (r=.485, P<.001) were also moderately satisfied for Pakistanis as compare to Bruneians.

Therefore, it can be summarized that Bruneians are more satisfied with the Internet access, affordability of gadgets for use, use of learning resources, and access to learning resources amid COVID-19 pandemic lockdown; whereas Pakistanis are less or moderately satisfied with the accessibility and affordability to the Internet and gadgets. Besides online learning
is still satisfactory to continue education during enforced lockdown it is affecting the satisfaction level of both Brunei Darussalam and the Islamic Republic of Pakistan masses.

Table 4. Correlation analysis of social functionality disorder factors influencing public anxiety

| Country    | Related factors                                                                 | Satisfaction Level |
|------------|---------------------------------------------------------------------------------|--------------------|
|            |                                                                                 | R                  | P       |
| Brunei     | I have reliable Internet support                                                | .437***            | <.001  |
|            | The online class attended gadgets are-                                          | .577**             | <.001  |
|            | affordable to me                                                                 |                    |        |
|            | I can use online learning resources to save my academic year while practicing     | .481**             | <.001  |
|            | social distancing amid COVID-19                                                 |                    |        |
|            |                                                                                | .485**             | <.001  |
| Pakistan   | I have reliable Internet support                                                | .176**             | <.050  |
|            | The online class attended gadgets are-                                          | .152**             | <.050  |
|            | affordable to me                                                                 |                    |        |
|            | I can use online learning resources to save my academic year while practicing     | .447**             | <.001  |
|            | social distancing amid COVID-19                                                 |                    |        |
|            |                                                                                | .436**             | <.001  |

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)
r Correlation coefficient

4- Discussion

Outcomes suggest that use and access to online learning resources during novel infectious disease a SARS-CoV-2 Coronavirus (COVID-19) Pandemic is crucial for student satisfaction. Survey-based studies carried out earlier to assess the impact of lockdown due to COVID-19 on education [3, 9, 10]. It suggests that these innovative solutions utilizing technology may help to bridge the educational gap. Results suggest that 17.5% of Pakistanis have high satisfaction while 31.5% of Bruneians have high satisfaction with the access and use of online learning
amid COVID-19 pandemic. Results suggest that Bruneians have more access to technology and they are used to online teaching modules. Brunei has the second-highest Human Development Index among Southeast Asian nations whereas Pakistan is a developing nation [14, 15].

The study mainly aims to assess the effect of access & use of online learning resources amid the COVID-19 lockdown on student satisfaction. Outcomes suggest that level of easy access and use are linked with student satisfaction in both Pakistan and Brunei. Student satisfaction is also linked to residence location, previous online learning experience, use of online learning resources by a friend or family. However, it is noted that there is no effect of gender and education level on the satisfaction of the student [16, 17].

Outcomes of the multivariate logistic regression suggest that students living in urban localities are more satisfied with online learning as compared to students of the rural areas for both nations. This is because urban localities have better access to reliable internet connectivity resources [18, 19].

The previously experienced students are more satisfied with online learning modules for both Brunei and Pakistan. However, a comparison shows that satisfaction was higher among Bruneian at (39.8%) as compared to Pakistanis (24.6 %). This is because Bruneian students are used to practicing online learning more as compared to Pakistanis. These outcomes are in line with previous studies which indicates that previously experienced online learners are more satisfied with the ongoing education system amid COVID-19 lockdown [20, 21].

Another interesting aspect is the use of online learning mode by friends and family. The use of online learning tools by peers provides a motivation that increases satisfaction among students in both countries. However, comparative analysis shows that Pakistanis (24.1%) are more satisfied as compared to Bruneians (20.5%) [22].
Online learning apps such as Zoom/Youtube live/Skype/Google meet/MS Team/ or other were found to be linked significantly with satisfaction for Bruneian students, however, for Pakistani students, these were insignificantly associated with satisfaction level. These outcomes show that Bruneians are more adapted to the use of online learning apps as compared to Pakistanis [23, 24].

Outcomes are consistent with the proposed hypothesis, which states that access and use of online learning factors depend on the reliable internet support, support gadgets for attending online classes, use online learning resources to save my academic year while practicing social distancing amid COVID-19, access to online learning resources during COVID-19 was positively associated with satisfaction among both Bruneian and Pakistanis students’ amid COVID-19.

Many studies have reported that closure of educational institutes due to the COVID-19 lockdown will have a significant impact on the education that demands online learning [10]. Moreover, the privileged students who have better access to online learning can perform better that ultimately leads to their satisfaction [25, 26]. Data analysis clearly shows that Bruneians are more satisfied with the use of the Internet \( r=0.437, P<.001 \) in comparison to Pakistanis. Besides affordability is also a prominent factor that contributes to satisfaction among Bruneians. This is because Bruneians belong to established economies while Pakistanis face considerable economic constraints [27]. Moreover, for access and use, online learning is correlated for both Bruneian and Pakistani students’. The students which have better access to online learning tools, are well adapted to their use and therefore more satisfied with online education as compared to underprivileged students who don’t have access to online learning tools.

Limitations of the study include facts that the situation is not clear whether the study outcomes can be generalized. This is since outcomes are limited to a handful of responses from
both nations. Therefore, a larger study involving more participants is needed to generalize the research findings. The study has, however, looked into substantial factors concerning access and use of online learning resources which impact students of developing and developed countries amid pandemic. However, other possible factors like lack of entertainment, cultural, and social services can also be evaluated in conjunction with satisfaction.

However, students’ satisfaction is affected during the lockdown in both regions due to bans on gathering, events, travel, shutting down the educational institutes disturbing routine life [28-30]. In general terms, countries with a strong economy can better cope with the emergency and provide robust attention to less privileged areas that are necessary during public health emergencies.

5- Implications & future recommendations

The COVID-19 lockdown has made significant disruptions in academic activities globally. In this study, we aimed to assess the satisfaction status of Pakistani and Bruneian students with online learning during this pandemic. Although a substantial proportion of students are using digital platforms for learning, many of them face a lack of satisfaction due to several challenges of access and use in online study. The outcomes of this study suggest the following recommendation to the government, policymakers, and institutional authorities.

There should be made a uniform academic plan for the universities and colleges to continue the learning process during an emergency e.g. this pandemic. The infrastructural facilities should be availed to the education institutions which can regulate the digital learning process during future health emergencies. Adequate funding needs to be ensured to improve the education system and provide training to stakeholders. A targeted
intervention strategy is needed to develop positive study space for students belonging to the vulnerable section of society.

In this critical public health crisis, open-source digital learning strategies should be adopted by teachers for conducting online classes. It is need of the hour to develop multi-prolonged strategies to build resilient education system, which can ensure skill development for the productivity of the young minds.

To increase socioeconomic status for access and use, students would be helped with scholarships because socioeconomic status is an effective variable predicting life satisfaction.

6- Conclusion

Since, emergence of COVID-19 in late December 2020, educational activities around the globe have been hampered significantly. Most of the educational institutes globally have shifted from conventional education to online learning. In this study we aimed to assess the satisfaction of students with online learning along with parameters that affect satisfaction level. Outcomes revealed that there is a relationship between students’ satisfaction and access & use of online learning. It is concluded that Bruneian are more satisfied with online learning as compared to Pakistanis. Living in urban area is also a major factor contributing to satisfaction. Moreover, previous experience with use of online learning is prevalent among Bruneians, use of online resources by friends and family is another factor contributing to satisfaction with online learning among Pakistani students amid COVID-19. Correlation analysis suggest access and use of online learning amid COVID-19 were positively associated with satisfaction among both populations. However,
Bruneians are more satisfied with Internet access and affordability of gadgets as compared to Pakistanis. This shows that students of nations with lower socio-economic status need more attention and support. Therefore, high-end programs that cater to the educational requirements of the students belonging to low-income countries need to be devised to overcome access and use difficulties. Online education has come in to save academic year of many pupils and educational institutes globally should implement an online learning programme into their systems to deal with unprecedented situations.

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**Conflict of Interest**

None