

Artículo Original / Original Article

Navigating the Digital Shift: Exploring the Online Learning Experience of International Bangladeshi Students During COVID-19

Navegando el cambio digital: Explorando la experiencia de aprendizaje en línea de los estudiantes internacionales bangladesíes durante el COVID-19.

Imran Iqbal Imon¹; Tanzuma Islam Miti²; Tayab Uddin³

¹ University of Turku, Finland

² Cross Cultural Learner Center, Canada

³ Oslo Metropolitan University, Norway

Email de correspondencia: *imraniqbal.edu@gmail.com*

Cronograma editorial: *Artículo recibido 12/05/2024 Aceptado: 03/01/2025 Publicado: 01/07/2025*

Para citar este artículo utilice la siguiente referencia:

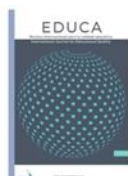
Iqbal Imon, I., Islam Miti, T., & Uddin, T. (n.d.). Navegando el cambio digital: Explorando la experiencia de aprendizaje en línea de los estudiantes internacionales bangladesíes durante el COVID-19 (2025) EDUCA. Revista Internacional Para La Calidad Educativa, 5(2), 1-18.
<https://doi.org/10.55040/hdh4jd21>

Contribución específica de los autores: Los autores han participado conjuntamente en todas las fases de la investigación.

Financiación: No existió financiación para este proyecto.

Consentimiento informado participantes del estudio: Se han solicitado los consentimientos informados de los participantes.

Conflicto de interés: Los autores no señalan ningún conflicto de interés.



Resumen

Este estudio investiga las implicaciones académicas de la pandemia de Covid-19 en estudiantes internacionales bangladesíes, enfocándose en sus experiencias y desafíos para adaptarse al aprendizaje en línea. Utilizamos un enfoque mixto para obtener información sobre las vidas académicas y emocionales de 76 estudiantes mediante encuestas y discusiones en grupos focales. Los resultados mostraron tendencias tanto cuantitativas como cualitativas. Los hallazgos destacan el impacto significativo de la mala conectividad a internet, la falta de participación en clases virtuales y los problemas de salud mental en el rendimiento de los estudiantes y su experiencia general de aprendizaje. Con el tiempo, el apoyo administrativo y la supervisión en línea mejoraron, pero muchos estudiantes aún requerían más interacción presencial y encontraban difíciles las demandas de estudio autodirigido. El estudio concluye enfatizando la necesidad de que las universidades refuercen los recursos de salud mental, brinden apoyo técnico e implementen métodos de enseñanza flexibles para apoyar eficazmente a los estudiantes internacionales durante crisis. Esta investigación contribuye a los debates sobre la creación de entornos educativos en línea resilientes y de apoyo que puedan sostener el rendimiento y el bienestar de los estudiantes ante interrupciones globales.

Palabras clave: COVID-19, aprendizaje remoto, educación digital, estudiantes internacionales, Bangladés

Abstract

This study investigates the academic implications of the Covid-19 pandemic on Bangladeshi international students, focusing on their experiences and challenges in adapting to online learning. We used mixed method to get information about the academic and emotional lives of 76 students by surveying them and talking to them in focus groups. The results showed both quantitative and qualitative trends. The findings highlight the significant impact of poor internet connectivity, lack of engagement in virtual classes, and mental health issues on students' performance and overall learning experience. Over time, administrative support and online supervision improved, but many students still required more in-person interaction and self-directed study demands. The study concludes by emphasizing the need for universities to enhance mental health resources, provide technical support, and implement flexible teaching methods to support international students effectively during crises. This research contributes to discussions on creating resilient and supportive online educational environments that can sustain student performance and well-being amidst global disruptions.

Keywords: COVID-19, remote learning, digital education, international students, Bangladesh



Introduction

The COVID-19 pandemic, which originated in Wuhan, China, in December 2019, rapidly evolved into a global health crisis, resulting in unprecedented transformations in various sectors, including education. Schools had to move their lessons online as government-imposed travel bans and lockdowns to contain the infection. The rapid shift to online education has presented additional obstacles for students, particularly those pursuing higher education in foreign settings (Alam, 2020; Aristovnik et al., 2020).

The epidemic has not only made it harder for international students to learn since they depend on the intellectual, social, and cultural experiences that come with going to school in person (Chen et al., 2020; Duraku & Hoxha, 2020), but it has also put them in touch with problems that are unique to them (Chowdhury et al., 2021; Coman et al., 2020). The availability of dependable technology, appropriate learning environments, and consistent internet connections are some of the difficulties in this category. The disruption experienced by Bangladeshi foreign students was further exacerbated by a lack of proper support networks overseas, economic insecurity, and social isolation.

Throughout the COVID-19 epidemic, this research aimed to investigate the academic performance of Bangladeshi foreign students. More specifically, the study concentrated on how the rapid switch to online learning has impacted the educational results of this specific student group. This study aims to emphasise the important elements that have affected their capacity to adjust to the online learning environment and to provide recommendations for limiting the detrimental consequences of future disruptions in education. We will accomplish this by evaluating their experiences both before and during the epidemic.

Background of the Study

The higher education sector plays a critical role in fostering global collaboration and knowledge-sharing among students from different cultural and socio-economic backgrounds. For many students, studying abroad brings an opportunity to gain a high-quality education, develop intercultural competencies, and build professional networks (Rabbani & Kyunghak, 2020). In recent years, an increasing number of Bangladeshi students have pursued higher education abroad, mostly in Europe and North America (Alam, 2020; Hossain & Khan, 2021).



However, the outbreak of the COVID-19 pandemic disrupted the higher education sector in ways that had never been anticipated. Universities across the globe were forced to close their campuses (Schleicher, 2020; Purcell & Lumbreras, 2021) and shift to online learning (Mishra et al., 2020; UNICEF, 2020; WHO, 2020). This transition brought uncertainty among students and educators alike (Maatuk et al., 2020; Purcell & Lumbreras, 2021). For international students, the transition posed significant challenges, including limited access to learning resources, difficulty in maintaining communication with professors and peers, and disruptions to their academic schedules (Aristovnik et al., 2020; Mishra et al., 2020; Holzer et al., 2020).

In the context of Bangladeshi international students, the pandemic exacerbated existing challenges, such as financial constraints, social isolation, and cultural adjustments. Many students who were studying in countries with high COVID-19 infection rates faced the dilemma of returning to their home country or staying abroad, where they often had limited access to social support networks (Yıldırım et al., 2021). Those who chose to stay abroad had to adapt quickly to online learning platforms, which in many cases were ill-suited to their needs. Many of them traveled back home as there was no job besides studying (Talib et al., 2021; Yildirim et al., 2021), by which they could manage their living costs abroad. Most of this group of students reported difficulties in accessing course materials due to poor internet connections and a lack of access to study spaces conducive to effective learning (Gonzalez et al., 2020; Zalat et al., 2021).

Moreover, the transition to online education presented additional barriers, such as the lack of personal interaction with instructors and classmates, which is essential for developing critical thinking and problem-solving skills. For many students, especially those in fields requiring hands-on experience or laboratory work, the shift to virtual learning significantly affected their academic performance (Duraku & Hoxha, 2020; Zalat et al., 2021). In addition, the emotional toll of being away from family and friends during a global health crisis compounded the stress experienced by many international students, leading to increased mental health issues and a decline in academic engagement (WHO, 2021; Zalat et al., 2021).

This research aims to address the gap in understanding the specific challenges faced by Bangladeshi international students during the pandemic and to explore how universities and educational institutions can better support these students in future crises. By focusing on both



the academic and personal experiences of the students, this study seeks to provide insights into how higher education institutions can create more inclusive and supportive online learning environments for international students, ensuring that they continue to thrive even in the face of global disruptions.

Objective of the Study

The objective of this study is to explore how the COVID-19 pandemic impacted the academic performance of Bangladeshi international students, focusing on their experiences with online learning during the crisis. The study seeks to understand the specific challenges students faced, such as technological barriers, social isolation, and a lack of institutional support, and how these factors influenced their academic outcomes. The aim is to identify areas for improvement in university support systems to better assist international students in similar crises.

Research Questions

1. How has the COVID-19 pandemic affected the academic performance of Bangladeshi international students?
2. What were the major challenges faced by Bangladeshi international students in adapting to online education during the COVID-19 pandemic?
3. How did students' academic performance before the pandemic compare to their performance during the pandemic?

Methodology

This study employed a mixed-methods approach to comprehensively investigate how the COVID-19 pandemic affected the academic performance of Bangladeshi international students. The combination of quantitative and qualitative methods provided both measurable data and deeper insights (Caracelli & Greene, 1993; Creswell, 2009) into the students' experiences. This method is great for looking into how difficult it is to do well in school during a crisis because it gives us a fuller picture of the problems students are facing and how they are dealing with them (Creswell, 2009; Salehi & Golafshani, 2010).



Research Design

The research used a descriptive survey design combining structured questionnaires and focus group discussions. The survey collected quantitative data to measure students' academic performance and satisfaction with online learning, while the focus groups provided qualitative insights into their experiences, challenges, and perceptions of the support they received.

Sampling and Population

The target population for this study was Bangladeshi international students enrolled in higher education institutions abroad during the COVID-19 pandemic. Given the difficulty in accessing participants due to travel restrictions and social distancing measures, a snowball sampling technique was used. This method involves identifying a few key participants, who then refer to other potential respondents within their networks. Snowball sampling is particularly effective in reaching specific populations (Naderifar et al., 2017) that are difficult to access.

The study involved 76 Bangladeshi international students enrolled in four different countries, such as Finland, Norway, Canada, and Germany, including those pursuing undergraduate, graduate, and postgraduate degrees. Due to the opportunity to engage in online classes and maintain academic progress without the necessity of physical presence at the university, a segment of the sample population—comprising 34 students—chose to remain in Bangladesh. This decision was influenced by travel restrictions and limited access to European countries, exacerbated by protracted visa application procedures. Four focus group discussions were conducted via Zoom with 19 participants in each group to complement the quantitative survey data (Creswell, 2009; Morgan, 2014). However, some members in each group were unable to participate in the focus group discussion due to time limitations and varying time zones. The attendance of students in each group is as follows: 11 students in group A, 13 in group B, 9 in group C, and 14 in group D.

Data Collection Methods

Questionnaire Survey: A structured questionnaire was distributed online using Google Forms to collect quantitative data from the participants. The survey included questions on various aspects of students' academic experiences during the pandemic, such as administrative



support from universities; access to online lectures and educational materials; supervision and guidance from instructors, personal challenges such as mental health and technical issues

The questionnaire used Likert scale responses (ranging from 1: Strongly disagree to 5: Strongly agree) to measure the students' satisfaction levels and the pandemic's perceived impact on their academic performance. The data from these responses were then analyzed using basic descriptive statistics.

Focus Group Discussions: Four focus group discussions were conducted via Zoom with selected participants to complement the quantitative data. These discussions allowed for an in-depth exploration of the student's personal experiences during the pandemic. Among the subjects discussed were: Coping strategies for online learning; Issues related to mental health and isolation; The effectiveness of communication with instructors and university administration; and differences in academic experiences before and during the pandemic

The discussions were recorded, transcribed, and analyzed using thematic analysis to identify recurring themes and patterns in the students' responses. The qualitative data provided context and a deeper understanding of the quantitative results, offering insight into students' emotional and psychological challenges.

Data Analysis

Quantitative Analysis: We used descriptive statistics, such as frequency distributions and percentages, to analyze the quantitative data from the questionnaire and summarize the key findings. This approach helped identify trends and patterns in the student's academic experiences during the pandemic. The results were presented in charts and graphs for simple interpretation.

For example, students' satisfaction with online lectures and supervision was compared before and during the pandemic. The data also examined students' challenges, such as connectivity issues, lack of engagement, and mental health concerns.

Qualitative Analysis: We analyzed the qualitative data from the focus group discussions using thematic analysis. This method involved coding the transcribed interviews to identify key themes and subthemes from the talks. The qualitative data provided insights into the challenges students faced, their coping strategies, and the emotional and academic impact of the pandemic.



We highlighted and cross-referenced themes like "lack of engagement," "technical difficulties," "mental health struggles," and "improvement in administrative support" with the quantitative findings to provide a more nuanced understanding of the student's experiences.

Ethical Considerations

The study followed strict ethical guidelines to ensure the privacy and confidentiality of participants. Informed consent was obtained from all participants before data collection, and they were assured that their responses would remain anonymous. Given the sensitive nature of the topics discussed, especially regarding mental health, participants were provided with contact information for counseling services should they need further support after the discussions.

Limitations of the Study

Despite the valuable insights provided by this study, there were a few limitations. The relatively small sample size of 76 students and limited sampling area of only four countries limit the generalizability of the findings. A larger sample including Bangladeshi students from more countries could have provided more comprehensive data on the experiences of Bangladeshi international students during the pandemic.

Findings

The study's findings were analyzed concerning the research questions to provide a comprehensive understanding of how the COVID-19 pandemic affected the academic performance of Bangladeshi international students. These findings were derived from both the quantitative data collected through surveys and the qualitative insights obtained from focus group discussions.

Impact of the COVID-19 Pandemic on Academic Performance:

The COVID-19 pandemic had a notable impact on the academic performance of Bangladeshi international students. Most of the participants reported a decline in their academic outcomes during the transition to online learning. The key contributing factors were a lack of engagement, difficulties in concentrating during online classes, and technical issues such as poor internet connectivity and time differences among places. For instance, 55% of students



indicated they found it difficult to stay focused during online classes, which negatively influenced their ability to absorb course material and complete assignments on time.

Moreover, 61% of students reported reduced interaction with professors and peers, which affected their motivation and overall academic performance. Many students expressed that in-person interactions were critical for their academic success, and the lack of these interactions during the pandemic created feelings of isolation, further decreasing their academic engagement.

The lack of physical interaction with classmates and instructors also posed difficulties. Students found it challenging to engage in meaningful discussions on platforms like Zoom, especially when they had never met their classmates in person. Additionally, the inability to visit libraries and attend in-person classes diminished their motivation. Many believed that physical attendance in class, after-class library work, and discussions with peers were essential for their academic success—especially those who required deep discussions to understand complex topics.

Beyond academic challenges, financial instability and a lack of socialization further complicated their situation. Many students who had already been in a new country struggled to find jobs to support themselves, and they spent most of their time isolated in their rooms, maintaining distance from flat mates. The absence of social outings, combined with a constant fear of contracting COVID-19, exacerbated their anxiety. They were particularly worried that, without having friends or family nearby, falling ill would leave them without proper care. This anxiousness also affected their concentration on their academic activities.

Major Challenges Faced in Adapting to Online Education:

The study identified several major challenges faced by students in adapting to online education during the pandemic.

Technological Barriers: Poor internet connectivity was among the most frequently reported issues, especially in the first online semester. Students who were attending online classes from Bangladesh and remote areas struggled to maintain stable connections during

online lectures, resulting in missed content and a lack of engagement in discussions. 45% of students reported that connectivity issues frequently interrupted their learning.

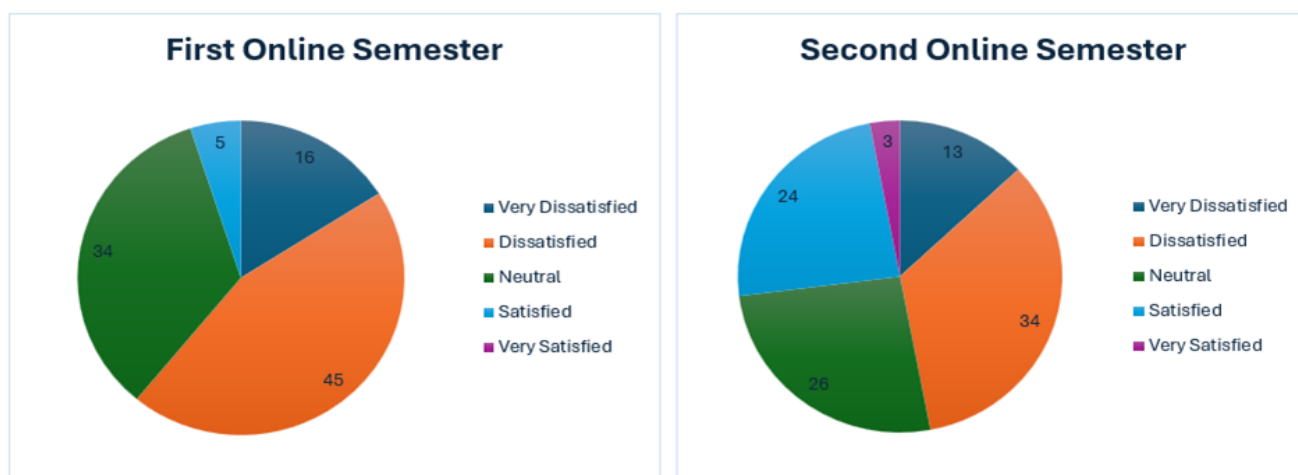


Fig 1: Internet connectivity for students

Supervision and Guidance: Initially, students experienced difficulties with supervision, as the lack of face-to-face meetings created communication gaps between students and their instructors. Only 19% of students were satisfied with the supervision they received during the first semester of online learning. However, by the second semester, this number improved to 35%, as universities adapted to online supervision through more frequent video calls and emails.

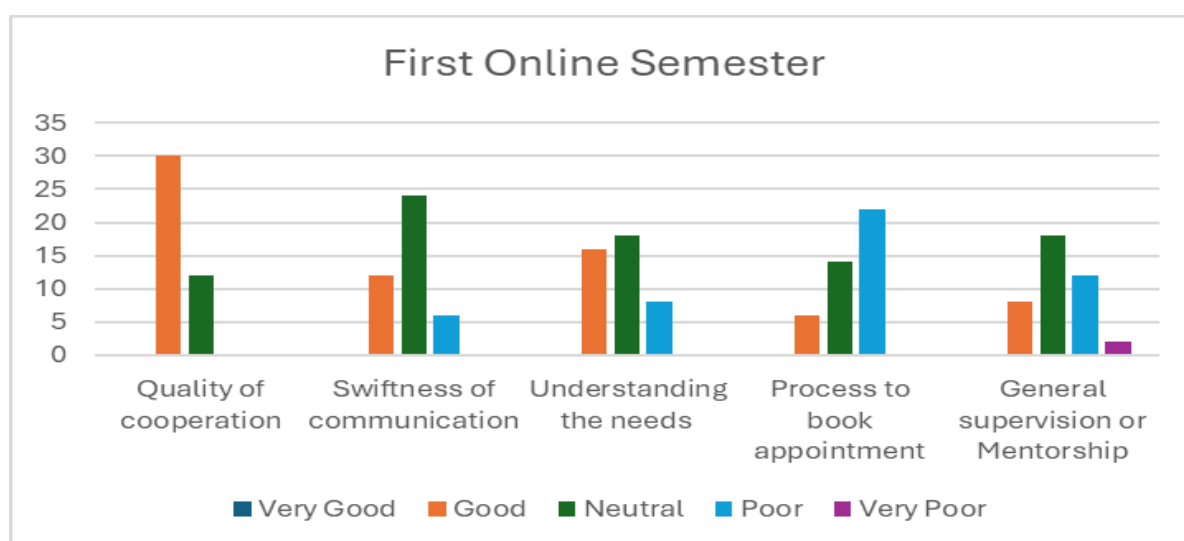


Fig: Students' opinion regarding supervision and guidance (1st Online Semester)

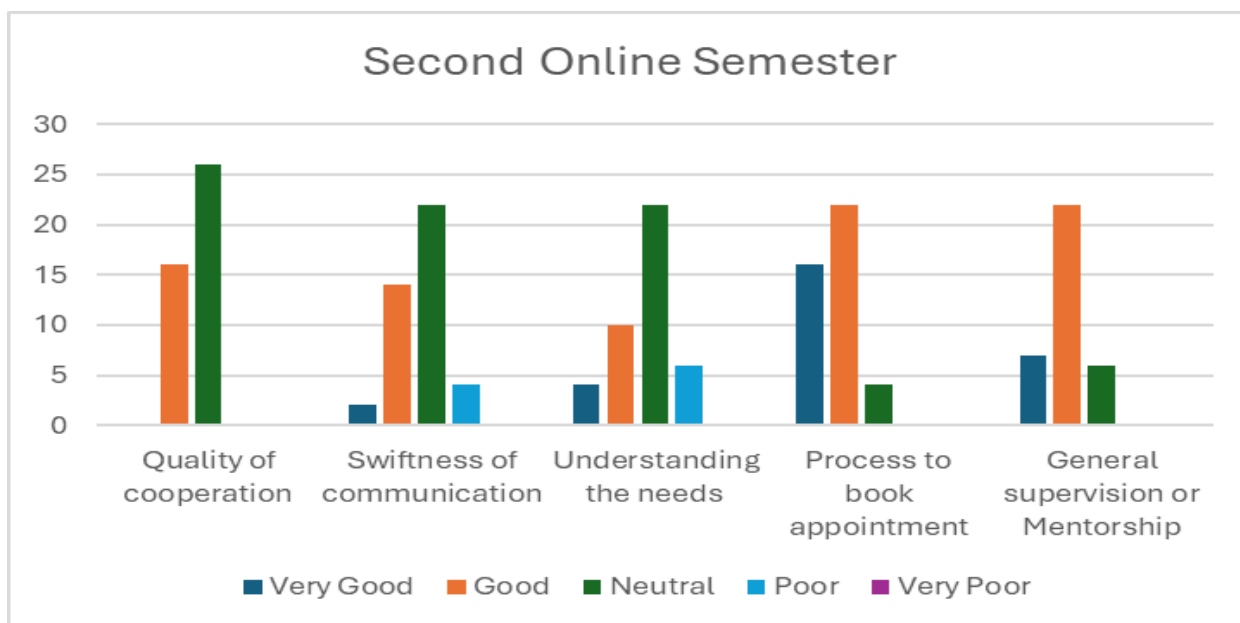


Fig: Students' opinion regarding supervision and guidance (2nd Online Semester)

Mental health and isolation: Many students expressed that the sudden isolation due to travel restrictions and lockdowns took a toll on their mental health. This isolation affected their academic performance, as they struggled to stay motivated in the absence of in-person social interactions with peers and professors. 44% of students reported a need for additional mental health support during this period.

Comparison of Academic Performance Before and During the Pandemic

The study found significant variations in students' academic performance and involvement before and after the COVID-19 epidemic. Students reported high levels of engagement and involvement in their academic work before the pandemic situation, owing to direct connections with instructors, organized learning settings, and access to useful materials. Specifically, 71% of students reported feeling favorably involved with their courses, actively engaging in discussions, experiments, and other hands-on activities that improved their knowledge and recall of the subject. This high level of interaction was critical to their learning experience, enabling students to communicate directly with classmates and instructors, ask questions, and get immediate feedback.

In comparison, just 11% of students reported feeling equally engaged during the epidemic. This sharp decline in involvement was primarily due to the obstacles faced by the



abrupt transition to online instruction. Many students had technical challenges, such as unstable internet connections or restricted device access, which made it difficult for them to fully engage in online sessions. Furthermore, the absence of supervision and face-to-face advice from professors contributed to a feeling of isolation, with students unable to explain concerns or obtain timely responses on tasks. The lack of practical, hands-on work—essential in professions that require laboratory or experience learning—also led to students feeling alienated and unmotivated, since these features were difficult to recreate in a virtual context.

Furthermore, students reported a considerable rise in their academic burden throughout the epidemic. Online learning platforms often required more self-discipline and planning, as students had to handle their studies individually without the fixed schedules offered by in-person courses. Many students said they struggled to adjust to the self-directed aspect of online learning, finding it difficult to juggle many courses without enough guidance. This adjustment in workload and learning style resulted in a reported drop in both grades and overall academic satisfaction. Many people believed that the growing dependence on self-study without proper direction made for a less enjoyable school experience, adversely hurting both motivation and academic success.

Strategies for future support:

The findings highlight several areas where universities can improve their support for international students during future crises. The most pressing need identified by students was for better access to mental health services. Many students reported that the emotional and psychological strain of the pandemic, coupled with academic pressure, significantly affected their performance.

Additionally, improving internet infrastructure and providing technical training for both students and faculty were seen as essential to creating a more effective online learning environment. Students also suggested that universities should offer more flexible learning schedules and a blend of synchronous and asynchronous teaching to accommodate different time zones and personal circumstances.



Discussion

The findings of this study reveal that the COVID-19 pandemic has had a significant and multifaceted impact on the academic performance of Bangladeshi international students. The shift to online learning presented various challenges, such as technical difficulties, limited engagement, and mental health struggles, all of which affected students' ability to perform academically. This study highlights the importance of understanding these challenges not only in the context of the pandemic but also in preparing for potential future crises that could disrupt the education sector.

Key Challenges and Adaptation

One of the major challenges identified was the lack of stable internet connectivity, which significantly hampered students' access to online learning resources and participation in synchronous classes. Furthermore, the absence of face-to-face interaction hindered meaningful engagement between students and faculty, leading to feelings of isolation and disconnection. Despite these challenges, students and universities gradually adapted to the online format, with improved administrative support and the increased use of recorded lectures and flexible schedules becoming more common.

However, the students' adaptation to online learning varied, and while some became more comfortable over time, others struggled with concentration and motivation. The shift to a self-directed approach to learning was challenging for those who relied on structured classroom environments and interactive sessions for understanding course content.

Suggestions for Future Educational Support

The findings underscore the need for universities to establish comprehensive support systems that can effectively address the challenges faced by international students during crises. These support systems could include:

Enhanced Mental Health Services: Universities should proactively offer counseling and mental health services, as isolation and anxiety were significant factors that affected students' academic engagement and performance. Offering virtual support groups and regular check-ins can be beneficial.



Technical Training and Support: Universities could provide technical training workshops for students and faculty to enhance students' ability to use online learning platforms effectively. Moreover, ensuring that students have access to reliable internet and suitable devices is essential for smooth online learning.

Flexible Learning Models: A blended approach that combines synchronous and asynchronous learning can help cater to students across different time zones and personal circumstances. Universities should consider offering recorded lectures, allowing students to revisit course materials at their own pace, which was found to be particularly useful in this study.

Limitation of the study:

This study, while providing important findings, acknowledges its limitations, including a small sample size and reliance on self-reported data, which may affect the generalizability of the results. Besides, this small-scale research focused on Bangladeshi international students, but future research could include a comparative analysis across students of different nationalities to identify common challenges and cultural differences in adaptation to online learning. There is also a need for studies that test and evaluate specific interventions or strategies implemented by universities to support international students during crises.

Conclusion

This study explored the academic impact of the COVID-19 pandemic on Bangladeshi international students, with a focus on their experiences adapting to online learning. The findings revealed that the sudden shift to virtual education posed significant challenges, affecting students' academic performance, engagement, and well-being. Issues such as inadequate internet connectivity, difficulties in adapting to self-directed learning, and a lack of face-to-face interaction were among the primary obstacles faced by these students (Alam, 2020; Aristovnik et al., 2020). However, it was noted that universities made efforts to adapt, gradually improving online resources, administrative support, and supervision (Duraku & Hoxha, 2021).

The study underscores the need for educational institutions to develop robust support systems for international students during crises. This includes enhancing mental health services, providing technical training for online learning platforms, and implementing flexible teaching



approaches to accommodate students' diverse needs (Gonzalez et al., 2020). While there were some positive outcomes, such as increased adaptability and flexibility in learning, the pandemic experience highlighted the limitations of the current educational models in supporting international students during global disruptions.

Given the complexities and challenges uncovered in this research, future studies should explore the long-term impacts of online education on academic performance, examine strategies that can enhance student support in crises, and compare the experiences of international students from different cultural backgrounds. Ultimately, the insights from this study contribute to the broader understanding of how global crises like the Covid-19 pandemic affect higher education and provide a foundation for improving educational resilience and inclusivity in the future (Alam, 2020; Aristovnik et al., 2020; Duraku & Hoxha, 2021).

References

- Alam, A. (2020). Impact of Covid-19 on Higher Education: A Review. *Journal of Education and Learning*, 9(3), 1-10.
- Aristovnik, A., Keržic, D., Ravšelj, D., Tomaževic, N., & Umek, L. (2020). Impacts of the COVID-19 Pandemic on the Life of Higher Education Students: A Global Perspective. *Sustainability*, 12(20), 8438. <https://doi.org/10.3390/su12208438>
- Caracelli, V. J., & Greene, J. C. (1993). Data Analysis Strategies for Mixed-Method Evaluation Designs. *Sage Journals*, 15, 195-207. <https://doi.org/10.3102/01623737015002195>
- Chen, J. H., Li, Y., Wu, A. M. S., & Tong, K. K. (2020). The overlooked minority: Mental health of international students worldwide under the COVID-19 pandemic and beyond. *Asian Journal of Psychiatry*, 54. <https://doi.org/10.1016/j.ajp.2020.102333>
- Chowdhury, S. A., Arefin, A. S. M. S., Omeihe, I., & Tanni, S. A. (2021). Towards a pedagogical paradigm shift: An examination of online higher education in Bangladesh during the COVID-19 crisis. *ResearchGate*. <https://www.researchgate.net/publication/354794930>
- Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online teaching and learning in higher education during the coronavirus pandemic: Students' Perspective. *Sustainability*, 12(24). <https://doi.org/10.3390/su122410367>



- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications.
- Duraku Z.H., & Hoxha L. (2021). The impact of COVID-19 on education and on the well-being of teachers, parents, and students: Challenges related to remote (online) learning and opportunities for advancing the quality of education. In Hyseni Duraku Z. (Ed.), *Impact of the COVID-19 pandemic on education and wellbeing: Implications for practice and lessons for the future* (pp. 17–45). University of Prishtina.
- Gonzalez, T., Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of COVID-19 Confinement on Students' Performance in Higher Education. *PLOS ONE*, 15(10), e0239490. <https://doi.org/10.1371/journal.pone.0239490>
- Hasnat, A. M. (2018), January 28; Student exodus doubles in a decade. *Dhaka Tribune*. Retrieved from <https://www.dhakatribune.com>
- Holzer, J., Lüftenegger, M., Korlat, S., Pelikan, E., Salmela-Aro, K., Spiel, C., & Schober, B. (2021). Higher education in times of COVID-19: University students' basic needs satisfaction, self-regulated learning, and well-being. *AERA Open*, 7(1), 1-13. <https://doi.org/10.1177/23328584211003164>
- Hossain, S. M. S., & Khan, M. R. (2021). Perception of distance learning in Bangladeshi tertiary education: Prospects and obstacles in the COVID-19 era. *Journal of Social, Humanity, and Education*, 1(3), 197-207. <https://doi.org/10.35912/jshe.v1i3.532>
- Maatuk, A. M., Elberkawi, E. K., Aljawarneh, S., Rashaideh, H., & Alharbi, H. (2021). The COVID-19 pandemic and e-learning: challenges and opportunities from the perspective of students and instructors. *Journal of Computing in Higher Education*. <https://doi.org/10.1007/s12528-021-09274-2>
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of the COVID-19 pandemic. *International Journal of Educational Research Open*, 1. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Morgan, D. L. (2014). Pragmatism as a Paradigm for Social Research. *Qualitative Inquiry*, 20(8), 1045–1053. <https://doi.org/10.1177/1077800413513733>



- Naderifar, M., Goli, H., Ghaljaie, G. (2017). Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research. *Strides Dev Med Educ*, 14(3). <https://doi.org/10.5812/sdme.67670>
- Purcell, W. M., & Lumbreras, J. (2021). Higher education and the COVID-19 pandemic: Navigating disruption using the sustainable development goals. *Discover Sustainability*, 2(6). <https://doi.org/10.1007/s43621-021-00013-2>
- Rabbani, M. & Kyunghak, K. (2020). A Study on the Transitional Experiences of Bangladeshi Students in Korea and Mobility to Australia and Canada. *Journal of South Asian Studies*, 25 (4), 85–128. <https://doi.org/10.21587/jsas.2020.25.4.004>
- Salehi, K. & Golafshani, N. (2010). Using Mixed Methods in Research Studies: An Opportunity with its Challenges. *International Journal of Multiple Research Approaches*, 4, 186–191. <https://doi.org/10.5172/mra.2010.4.3.186>
- Sandelowski, M. (2000). Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Research in Nursing & Health*, 23(3), 246–255. [https://doi.org/10.1002/1098-240X\(200006\)23:3<246::AID-NUR9>3.0.CO;2-H](https://doi.org/10.1002/1098-240X(200006)23:3<246::AID-NUR9>3.0.CO;2-H)
- Schleicher, A. (2020). The impact of COVID-19 on education: insights from education at a glance. *OECD*. Retrieved from <https://www.oecd.org>
- Talib, A. M., Bettayeb, A. M., & Omer, R. I. (2021). Analytical study on the impact of technology in higher education during the age of COVID-19: systematic literature review. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-021-10507-1>
- Unicef (2020). *COVID-19 and School Closures: Are children able to continue learning? A global analysis of the potential reach of remote learning policies*. Retrieved from <https://data.unicef.org/resources/remote-learning-reachability-factsheet/>
- United Nations (2020). *Policy Brief: Education during COVID-19 and beyond*. Retrieved from: <https://www.un.org/development/desa/dspd/wpcontent/uploads/sites/22/2020/08/sg>
- Vinikas, I. (2021, April 20). Top 5 Advantages & Disadvantages of Online Learning. *Kaltura*. Retrieved from: <https://corp.kaltura.com/blog/advantages-disadvantages-online-classes/>



World Health Organization (2021, May 21). *WHO Coronavirus (COVID-19) Dashboard*.

Retrieved from: <https://Covid19.who.int>

Yıldırım, S., Bostancı, S. H., Yildirim, D. Ç., & Erdoğan, F. (2021). Rethinking mobility of international university students during the COVID-19 pandemic. *Higher Education Evaluation and Development*. <https://doi.org/10.1108/HEED-01-2021-0014>

Zalat, M. M., Hamed, M. S., & Bolbol, S. A. (2021). The experiences, challenges, and acceptance of e-learning as a tool for teaching during the COVID-19 pandemic among university medical staff. *Plos One*, 16(3). <https://doi.org/10.1371/journal.pone.0248758>