

# Factors Affecting the Student Performance during the COVID-19 Pandemic

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## Abstract

In 2019, the wide COVID-19 outbreak had noxiously compelled the global educational institutes to experience the irrefutable impacts of the pandemic on students' academic performance. The destructing COVID-19 emergencies have colossally elevated the concerns of individuals regarding the students' perspective. The compounding outbreak challenges have made the global institutes alter the learning trends, thus inevitably impeding the students' learning performance. This abrupt situation has encouraged the institutes to embrace e-learning protocols, ultimately recording a severe toll on students' social and psychological well-being. In this regard, this empirical paper help to understand that the entire COVID-19 teaching has profoundly changed the learning environment, thereby bringing the unprecedented influence of COVID-19 fear, digital inaccessibility, teaching capability, psychological well-being, and work-life conflict to influence the students' performance. Considerably, this abrupt shift from conventional pedagogy to digital learning demands that institutions should restore the global educational standards to enhance student learning performance. However, in owing to such factors of increasing vulnerabilities, a positive government attitude is needed to overcome the gap existing due to the online shift in conventional learning. Significantly, the paper suggests that academicians and practitioners should redefine their educational definitions, substantially making these novel technologies combat the emerging learning challenges.

## Keywords

Online Learning, COVID-19, Student Performance, Mental Health, Well-Being

## 1. Introduction

On December 31, 2019, a novel infection, coronavirus (COVID-19), had stemmed

from a unique etiology, commencing from the ground of Wuhan, the city of the People's Republic of China (Zhu et al., 2020). The magnificence of this causative agent (SARS-CoV-2) has driven the world to experience economic repercussions, thus articulating it as a global emergency on March 11, 2020 (WHO, 2020). The terrifying characteristics of the COVID-19 susceptibility have refined the perception of vulnerability in youthful adults, admitting that the asymptomatic capabilities of the disease work as a catalyst while affecting worldwide institutions and communities.

Undoubtedly, the widespread of COVID-19 has reversed the term Global Village into the Global Pandemic, recognizing no cross-cultural limits, potentially impacting the western nations with its adversity. The tall susceptibility of COVID-19 has chartered its phenomenal effects on the world's economic sector explicitly, plumbing all levels of the education arrangements (Nicola et al., 2020; Sarfraz et al., 2022a; Sarfraz et al., 2022b). Therefore, to curb its widespread, governments had employed defensive protocols coming about in a transitory closure of academic institutes (e.g., in 192 countries), thus influencing the learning of 1.7 billion students worldwide (UNESCO, 2020a). Indeed, the result shows that the momentary closure of educational institutions has caused huge unsettlement in the global education sector, engendering middle developing countries to sense a hard hit, whopping a yearly loss of \$148 billion (Aziz Ur Rehman, 2020).

In particular, the COVID-19 catastrophe has massively disturbed the education system of developing nations such as Pakistan. The worldwide vulnerability wave has compelled educational institutes to transit learning activities from conventional mode to remote learning. Perhaps, the diversion of advanced countries from physical to online learning has made researchers uncertain about the challenges that may foist in the country's educational establishment. Indeed, the COVID-19 is a dreadful illusion affecting Pakistan's education structure, secretly pervading socio-economic activities (i.e., physical distancing) (Johnson, Veletsianos, & Seaman, 2020). Perhaps, this pandemic Shockwave has restrained educational activities, peeving Pakistan's education foundation. Indeed, this staging effect of the pandemic has overwhelmed Pakistan's education sector, imposing unprecedented socio-economic challenges (Noor, Isa, & Mazhar, 2020).

Unsurprisingly, these unusual challenges of the pandemic have disturbed the student learning schedule while reinforcing its misfortune on students of low-income backgrounds (UNESCO, 2020b). Moreover, in the wake of the COVID-19 crises, results showed that students were found highly disappointed and wretched by the utilization of new learning technologies (Al-Tammemi, Akour, & Alfalah, 2020), in this manner confronting difficulty in shifting to remote learning (i.e., online classrooms) (Owusu-Fordjour, Koomson, & Hanson, 2020).

Conceivably, the COVID-19 pandemic has alleviated magnificent devastation in the academic life of students, compounding to comprise their academic performance. Nonetheless, this rapid spread of the malignant infection has caused unprepared switching to remote learning, creating a vulnerable learning expe-

rience for the academic staff and students (Gacs, Goertler, & Spasova, 2020). In explanation, the study explains that during the COVID-19 pandemic, a substantial reduction was recorded in students' performance (Osipov et al., 2021), inevitably altering the learning outcome. Indeed, The COVID-19 uncertainty contrarily influences the student learning experiences, thus imparting academic performance (Hidalgo, Sánchez-Carracedo, & Romero-Portillo, 2021).

### **1.1. Study Significance**

Significantly, this study holds great importance in academia through bridging the gap by investigating the variables influencing student work performance. The study overcomes the literature gap by incorporating an effective system of reviewing the studies on student performance over the protracted period of the pandemic and not being confined to any time frame. Hence, the study allows future researchers to inflate the scope of the subject.

### **1.2. Study Aims and Objective**

Subsequently, this study highlights the significant factors prompting the student performance during the COVID-19 circumstances. Perhaps, antecedent studies indicate that the factors influencing student performance under the pandemic condition need to be comprehensively studied. Perhaps, based on this literature gap, this research considers different indicators affecting the student learning outcome, particularly in the COVID-19 setting. In specific, this study will provide a distinct picture of the COVID-19 pandemic, permitting the global policymakers to be careful of its negative effect whereas proposing approaches for mitigating its impact on student performance.

Perhaps, for examining student performance, different factors are considered, providing a clear understanding of COVID-19 effects on the global education sector. The factors influencing student performance include COVID-19 Fear, Distance Learning, Digital Inaccessibility, Teaching Capabilities, Psychological Well-being, and Work-life Conflict. On the basic level, the study indicates all these factors to display a harmful effect on student performance, articulating the COVID-19 period as a difficult time of academic history.

## **2. COVID-19 Fear**

Fear is the unpleasant feeling associated with the COVID-19 pandemic. In 2019, the COVID-19 widespread has entered our lives, threatening the performance of infinite individuals. The COVID-19 susceptibility has fortified the feeling of restlessness and worry among the specific group (i.e., students), hindering the efficacy of the online learning system. Indeed, the pandemic multi-layered emotion (i.e., fear and worry) has ravaged the world education foundation (Kernan, 2019), hampering student's academic performance.

Consistently, COVID-19 fear has disturbed the academic schedule while profoundly damaging the academic performance of university students (Sahu, 2020).

Perhaps, to demonstrate the relationship of COVID-19 fear on student performance, the findings reveal that a large population is disappointed with remote learning, thus impeding the student's work performance (Mahyoob, 2020). All in all, online learning is an essential element associated with the COVID-19 vulnerability. The result reveals that students with remote learning exhibit poor performance compared to students attending the class lecture (Garcia & Weiss, 2020).

However, COVID-19 has left a noxious hallmark on the global education system, causing a rigorous decline in the students learning activities. The heightened fear of the pandemic has made students believe that the current circumstances antagonistically influence their academic performance (Green, Noor, Ahmed, & Himayat, 2021). Similarly, a study of the Netherland suggested that weak learning infrastructure and long-time institutional closure during the pandemic have reduced student performance (Engzell, Frey, & Verhagen, 2021). Perhaps, the literature highlights, the endless coverage of COVID-19 fear as a crucial determinant in impeding student performance.

### 2.1. Maintaining the Integrity of the Specifications

The swift development in technology makes distance education permissible for the academic staff and the learner (Murphy, 2020). Distance education refers to the experience of physically dispatching the learner and the instructor from each other, thereby influencing the learning activities. Arguably, the disconnect among the individuals (i.e., teacher-student) is the perfect example of sharing information beyond the confined borders of the country. This intuitive commonality alludes to the capability of utilizing the computerized network (e.g., computer-mediated learning, web-based learning) for facilitating the efficacy of virtual learning (e.g., online academic programs) (Basilaia & Kvavadze, 2020).

Notably, the negative effect of the COVID-19 pandemic had explained by the apparent relationship between distance learning and academic performance (Perez-Lopez, Atochero, & Rivero, 2021). The disadvantage of distance learning during the pandemic includes the disassociation between the teacher and the student, environmental interruptions, and competency level, affecting the student performance.

In the wake of the COVID-19 crises, distance learning has become a new norm, potentially hindering the learning outcomes. Distance education encourages the students to initiate their learning activities from the personal workspace (i.e., home), thus diminishing physical and social interaction between the instructor and the learner while affecting the academic performance (Allam, Hassan, Mohideen, Ramlan, & Kamal, 2020). Given the statement, a study indicates that a lack of consultation facilities with the instructor results in declining student performance (Sintema, 2020). Indeed, the lack of teacher-to-student instruction affects the learner's performance attending the virtual classroom, thus achieving unfavorable learning outcomes (Bueno, 2020).

Furthermore, distance learning has triggered environmental interferences such

as superfluous discussions with friends and family (i.e., chatting), thereby pulling down the effect of academic achievement on enfeeble group of students. Therefore, the changes in learning activities during the COVID-19 containment make distance learning the strongest predictor of destitute work performance (Giusti et al., 2021).

Moreover, the COVID-19 intrusion has presented global challenges in making education unreachable and inaccessible to underprivileged students, consequently influencing student achievement. For all the intents and purposes, distance education during the widespread period has questioned the students' skill development and found out that distance education failed to fulfill the competency prerequisite for veterinary medical students, thereby recording a decrease in academic performance (Mahdy, 2020).

## 2.2. Digital Inaccessibility

Before online learning is solely dependent on the power of technological infrastructure such as internet access, while its poor connectivity results in denying access to online activities. This reliance on e-learning has brought unprecedented challenges for institutions, academic faculty, and learners. However, the negative impact of the COVID-19 has made technological inaccessibility a prime issue for the users (i.e., teachers and students). It is surprising to know that in one location, the pandemic has pushed the technology to another level, achieving viable learning outcomes. But, on the contrary, places with the absence of technical infrastructure have rumbled the entire education system (e.g., underprivileged countries) (Magomedov, Khaliev, & Khubolov, 2020).

The COVID-19 vulnerabilities have caused colossal damage to poor individuals. Approximately 465 million pupils had been denied the online facility (i.e., e-learning) due to the inaccessibility of internet connectivity (Aziz Ur Rehman, 2020). This unstable technological improvement has influenced the online learning session, alleviating education chaos. Furthermore, according to the Pakistan Telecommunication Authority, only 36.86% population has access to broadband internet (PTA, 2019). Similarly, students' responses during the pandemic crises showed that 57.3% of students confronted a problem regarding the availability of internet connections. Perhaps, these student-faced issues have rigorously affected the individual learning performance (Elhadary, Elhaty, Mohamed, & Alawna, 2020). Moreover, a study aimed at the COVID-19 emergencies showed that the students of developing nations have encounter trouble as 80% of the student population denied the essential digital facility (i.e., computer and internet), and the need for cheap hardware has hampered the academic performance of student lodging in rural regions (Alanezi & AlAzwani, 2020).

However, technology without equity among the learners may lead to incapable learning. The lack of adequate infrastructure is a disincentive to the poor students. The exceptional academic change from physical space to online tutorials has influenced individual work performance. Given the explanation, the

study shows that students who lack access to internet facilities are disadvantaged, thereby negatively affecting their Grade Point Average (GPA) (Sahu, 2020). Likewise, the COVID-19 widespread has contrarily impacted the performance of underprivileged students (i.e., low-income-performing peers), thus declining their GPA by 5%. In comparison, the achievement of top-performing students was also disproportionately disturbed, recording a sharp decrease in student performance (Rodríguez-Planas, 2021).

### 3. Teaching Capabilities

Digital competency alludes to the individual aptitude, knowledge, and attitude required to drive technological innovation. Individuals (i.e., students and teachers) with low digital competency lack behind in remote activities. The computer proficiency level and electronic support from the institution influence the acceptance of the academic staff to enjoy online teaching. Perhaps, the inefficiencies of the COVID-19 have diminished the digital competence of the education staff, thus making remote teaching most vulnerable. However, in the COVID-19 pandemic, the abrupt shift from conventional learning to emergency teaching has affected the instructors teaching abilities (Garcia & Weiss, 2019). This overnight shift to e-learning has brought considerable challenges for individuals, such as inadequate knowledge of technological infrastructure, poor digital connectivity, and weak tutorial capabilities (Uwezo, 2020).

The result indicates that the COVID-19, in general, has changed the pedagogy that presently leans towards using the online medium (i.e., Zoom, Skype, Google Meet) for delivering the lectures (Zhang, Wang, Yang, & Wang, 2020). The abrupt shift from the physical classroom to online learning has changed the teaching methodology, providing a new virtual experience for the instructors of developing nations (e.g., Pakistan). As a consequence of sudden changes in academic life, the teaching staff is found incapable of managing the online portal, thus making students dissatisfied during the critical period of the pandemic.

Furthermore, Afghanistan is one of the low-income nations with a weak ICT foundation (Machado, Bonan, Perez, & Júnior, 2020), where online teaching has resulted in a novel marvel unacquainted to most instructors. The result shows that the need for specialized training in utilizing computerized applications imposes unique challenges towards online education (Hashemi & Kew, 2021). Aimed at the COVID-19 vulnerability, Afghan students reported a lack of interest in online sessions due to unsatisfactory teaching patterns. The deficient computer competencies with expanded workload have perverted students from improving their academic performance in the context of a new teaching environment. The study reveals that students had found themselves highly dissatisfied with the teaching capabilities of their instructor, resulting in depreciating the student's academic performance (Hashemi, 2021).

In particular, a study demonstrates that student performance is greatly affected by instructor learning expectations (Brandmiller, Dumont, & Becker, 2020). Pro-

fessor expectation refers to a set of events triggering the teacher's learning desires. The desires are communicated to students, allowing students to alter their behavior, impacting the student outcomes. Instructor expectations often assist in identifying the complexities of the working environment (e.g., online classroom) while fulfilling the learning needs of the students. But, all in all, the pandemic crises have affected the professors' desires (i.e., ability to teach) by unfavorably impacting the instructional activities, tempering the student academic performance (Gentrup, Lorenz, Kristen, & Kogan, 2020). Hence, the literature states that COVID-19 has made teaching inabilities to suppress the individual interest, thus achieving destitute academic results.

### 3.1. Psychological Well-Being

More than a year of staging loss, pity, isolation, and instability have taken a severe toll on students' psychological health due to the compounding challenges experienced within the online setting. Concurring to the international statistics, the COVID-19 pandemic had aggravated the feeling of psychological distress (Qiu et al., 2020), anxiety (Horesh & Brown, 2020), and worry (Wang et al., 2020) among the people. In which 40.4% were youth, detailing that their psychological issues have appeared as post-traumatic side effects.

The research explains that the lack of emotional support and social interactions are contrarily related to the mental health of the female student (Elmer, Mepham, & Stadtfeld, 2020). Perhaps, the study held in Pakistan indicates that nearly 44% of the total student population is enduring the dreadful consequences of the COVID-19 episode, while 54% population is suffering from the unfavorable effect of coronavirus (Kaleem, Talha, Nazir, & Hafeez, 2020). In particular, the literature indicates that the heightened level of symptomology in students is promoted by the expanding vulnerability of the pandemic, affecting student performance (Giusti et al., 2021).

Likewise, another study illustrates that in China, the psychological impact of the COVID-19 repercussions has come about in students to experience a different level of adversity, hence essentially relating the negative effect of the outbreak with poor academic performance (Cao et al., 2020). In addition, during the COVID-19 widespread, the sudden changes in student sleeping pattern (68%), weak concentrating level (67%), and massive energy loss (58.6%) has expanded the probability of experiencing high cognitive symptoms, subsequently increasing the concern for student performance (Son, Hegde, Smith, Wang, & Sasangohar, 2020).

Student performance strongly relates to the students' psychological welfare while frequently reporting traumatic distress during the COVID-19 containment. The COVID-19 widespread has raised the concerns of the students regarding the online learning system. This request a more noteworthy need for self-learning, raising the concerns for physical and mental welfare, thus influencing the student's future careers and performance. Nonetheless, the experienced

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psychological distress (i.e., anxiety, depression, stress) has expanded the student workload, preventing them from maintaining their work performance (Garris & Fleck, 2020).

Moreover, the research also explains that extensive utilization of technology during the pandemic has contrarily influenced student psychological welfare. The prolonged online session forces the students to sit in front of the computer screen, breaking their concentration while affecting their psychological health. Altogether, the COVID-19 issue (i.e., technostress) makes the online class dull and boring (Adnan & Anwar, 2020), thus impairing the work performance (Araújo, de Lima, Cidade, Nobre, & Neto, 2020).

Concluding, during the COVID-19 circumstances, the rapid closure of educational institutes has suspended the learning sessions, interrupting the regular flow of academic activities (Jacob, Abigeal, & Lydia, 2020). The drawn-out period of self-isolation has adversely influenced the students' mental health while disturbing their study habits, thus damaging their academic performance.

### **3.2. Work-Life Conflict (Social and Family Life)**

The rapid evolution of COVID-19 has ruffled the academic life of the students. The prolonged continuation of this malignant disease has harmed the educational foundation, resulting in the transitory closure of worldwide education institutes. A sharp decline in academic activities during the COVID-19 pandemic has affected the students' social life, causing students from less privileged backgrounds to experience a severe socio-economic toll (Aucejo, French, Araya, & Zafar, 2020).

In particular, the research demonstrates that work-life balance creates a sense of belongingness and a feeling of positive connectivity while positively influencing the student performance in a new learning environment (Peacock & Cowan, 2019). Strikingly, the COVID-19 emergency states that work-life conflict and weak social interactions have reduced academic integrity, constraining the students to moan over the misfortune of an interactive learning environment (Joshi et al., 2020). Indeed, the COVID-19 pandemic has disturbed the social connection of the students with their family and friends, inevitably affecting their academic achievement (Cao et al., 2020).

Similarly, the inefficiency of online teaching during the pandemic has expanded student absenteeism, family conflict, and work stress, causing irreparable academic loss (Harris, 2020). It had observed that nearly 51.2% of teachers believed that the student's poor academic performance and high absenteeism were due to lack of social connection, influencing the student motivation to perform well during the COVID-19 crises (Elhadary, Elhaty, Mohamed, & Alawna, 2020).

Indeed, the COVID-19 pandemic has influenced the social and family life of students by experiencing a decline in social support from the social network (i.e., family and friends), thus hampering their academic results. Perhaps, in the COVID-19 pandemic, excessive workload (i.e., online class) with diminishing social



bolster makes students dissatisfied with their academic performance (Osipov et al., 2021).

## 4. Conclusion

Outstandingly, the existing literature on e-learning shows that the COVID-19 pandemic had rumbled the worldwide education foundation, averting the learning needs of the students, thus affecting their academic performance. A profound understanding of literature (i.e., factors) provides a comparable education experience of how the education sector had changed during the pandemic crises. The distinctive variables have provided a clear understanding of the pandemic affecting the individual performance (i.e., students).

In particular, the COVID-19 flare-up has worsened the school system, thereby influencing the students' academic performance. The present school system provides a real opportunity to turn down the COVID-19 economic challenges into worthy incentives. Indeed, this requires thinking out of the box, consolidating effective strategies to screen the distinctive factors affecting student performance. More broadly, online learning has become a new normal during the pandemic.

Perhaps, in the wake of the COVID-19 pandemic, the study concludes that the students have experienced a significant misfortune of learning time due to the sudden shift of conventional activities to remote learning. Additionally, the pandemic circumstances have led to a massive disruption in student social life, fundamentally initiating unique socio-economic challenges, and affecting the social network (i.e., family and friends). Moreover, the study reveals that due to the technological inaccessibility, the students are most likely to lose the learning time, compounded by the ad-hoc efforts of remote learning. Indeed, the pandemic has hurt the psychological health of the students, thus achieving destitute outcomes.

Hence, this research sheds light on the COVID-19 intrusions, illustrating the socio-economic challenges affecting student life. The study suggests that the new policies can mitigate the negative effect of COVID-19 on student performance. Conclusively, the education sector needs to be restored by fostering the learning activities, therefore positively influencing student performance.

### 4.1. Practical Implication

The practical implication of the study lies within the significance of a viable e-learning system and its impact on changing student academic performance, particularly in the period of COVID-19 uncertainty. Limited literature had found in the context of developing countries. Perhaps, the primary suggestion proposes that the actual impact of the COVID-19 pandemic needs investigation. Thus, future studies should carry out extensive research while expanding the scope of the subject.

Arguably, the COVID-19 circumstances have consolidated the macro-scale factors affecting the student performance while translating these variables into

proximal micro levels such as the social and family life of individuals. Considering the micro context provides researchers to understand the pupils' academic activities and patterns, influencing the learning outcome. Indeed, this is a conceptual blueprint that requires attention during the COVID-19 outbreak. Against this background, the theoretical understanding explains that expanding heterogeneity in learning activities does not explain the strength of the impact, affecting the individual academic performance. Perhaps, these components are known as institutional filters (Schoon & Bynner, 2019), preventing the macro-level factors from manifesting onto a personal level, thus providing insight into the intensity of the effect.

In addition, this study has outlined the effect of diverse factors on student performance. The study has provided special consideration to the pandemic era, thus achieving specific results (i.e., reduced academic performance). Hence, future researches should investigate the effect of these variables (e.g., COVID-19 Fear, Distance Learning, Digital Inaccessibility) on student development, motivation, retention as a part of the learning experience during pandemic crises (El Said, 2021).

Furthermore, the study aims to study the school system of a developing nation (i.e., Pakistan). But, unfortunately, the study cannot say anything about the effects of these factors in other developing countries such as Indonesia, Bangladesh, and the Philippines. Every country's school system is different from others in terms of cultural values and learning strategies. Perhaps, this study refrains from speculating the potential cross-cultural academic differences. Therefore, future studies should incorporate the regional differences potentially explaining the differential effect of pandemics (Zar, Dawa, Fischer, & Castro-Rodriguez, 2020) on work performance.

In conclusion, this study has implications for academic administrators, academic counselors, faculty, policymakers, practitioners, educational professionals, empowering them to compel effective learning practices while addressing the negative consequences of the pandemic on student performance. Therefore, future studies should analyze each variable that can help to understand the valuable parameters influencing student performance.

## 4.2. Suggestions

The COVID-19 emergencies have led the educational sector to experience irrefutable impacts, thus imposing a disadvantage on a specific group of individuals (e.g., students). Consequently, a viable education system needs to be built during pandemic crises, thus achieving positive learning outcomes (Garcia & Weiss, 2020).

Online learning is an elite practice benefiting only the advanced nations. Thus, the study suggests that, for upgrading the online education system, a robust technological structure needs to be developed, providing responsive troubleshooting services and establishing a potent communication medium between the instruc-

tor and the students. Therefore, ensuring a highly interactive learning environment between the individuals (i.e., student-teacher), the government should back up the immense coverage of web networks in every location. The unequal distribution of technology in the low to middle developing countries makes the learners suffer while diminishing work performance. Advanced capabilities, poor web connectivity, and inadequate digital competency (i.e., teaching inabilities) have drastically ruined the learning environment, making the digital facility no longer a privilege (Malik, 2020). Indeed, a government initiative of equitable education during the COVID-19 crises will provide the best solution to the educational institutes for solving the emerging technological challenges.

Therefore, the study recommends, the government requires following essential steps for overcoming the COVID-19 challenges, influencing student performance. Given the statement, the study prescribes that the government should provide funds to aid learning activities (i.e., online learning) through technology improvement (Anwar, Khan, & Sultan, 2020). The viable execution of technology encourages the institution to form a connection between the instructors and the pupils. However, during the pandemic, technology should be utilized as a schooling aid instead of a substitute. Indeed, this epic transformation of school programs with specialized support will result in enhancing student performance.

Furthermore, in developing countries like Pakistan, organizations should offer tech training and workshops to their faculty members, thus upgrading the productivity of the learning system (Mumtaz, Saqulain, & Mumtaz, 2020).

Perhaps, the ultimate consequences of the pandemic have disrupted the usual learning activities, bringing disincentives for a vulnerable population. Hence, in reaction to COVID-19 vulnerability, there is a need to call for recuperation changes. Indeed, to reinforce the establishment of the teaching system during the pandemic, the government should invest in supporting academic activities (Garcia & Weiss, 2020). Moreover, to lead from conventional learning methods to remote learning, institutions should also ensure that the prolonged utilization of technology during the online session does not affect the student's social life and psychological health.

Verily, all these proactive steps will offer the educational institutes to provide state-of-the-art learning opportunities to the students during the COVID-19 pandemic. Moreover, it will also assist future researchers in performing a study, highlighting the positive effect of the pandemic on student academic performance.

### **Conflicts of Interest**

The author declares no conflicts of interest regarding the publication of this paper.

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