

COVID-19-induced Learning Disabilities and the Academic Experiences of U.S. College Students

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The novel coronavirus disease 2019 led to learning disruptions for most college students in the United States. These disruptions illuminated certain learning disabilities, which had varied effects on students' academic experiences. Our study reviewed the impact of the COVID-19-induced learning disabilities on student academic performance and enrollment. The findings reveal an uneven impact of the pandemic on specific groups of students. Some factors contributing to the observed impact on students' academic experiences are limited access to technological resources, transactional distance, mental health, economic and health shocks. Possible policy interventions must include addressing the inequities associated with access to educational resources, improving existing curricula to adapt to recent changes in the labor markets, and adopting measures to address student mental health issues.

Keywords: COVID-19; College Students; Health Shocks; Academic Experiences

INTRODUCTION

Without a doubt, Coronavirus disease 2019 (COVID-19) has changed the landscape of higher education as we know it. The imposed nationwide lockdowns induced by COVID-19 in March 2020 led to the switch to remote instructions and learning across several institutions in the middle of the spring 2020 semester. Indeed, the abrupt switch to virtual learning served as a learning disruption for most students unaccustomed to this type of learning. However, it is important to note that this learning disruption has illuminated specific learning issues associated with college students that previously went unnoticed. In particular, certain learning disabilities among college students have been exposed or catalyzed by factors related to the COVID-19 pandemic.

The pandemic has also exposed opportunity gaps that persist in the United States educational system. These opportunity gaps show themselves in terms of gaps in access to resources needed to enhance the academic achieve-

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ments of students from disadvantaged communities. In particular, the aggravated impact of the pandemic on specific groups, such as the low-income, Black, Latino, and Native American communities, illustrates how failure to address inequities in the areas of healthcare and economic opportunities exacerbates the impact of any crisis on those communities. Accordingly, COVID-19-induced learning disabilities provide a chance to address the existing opportunity gaps and a reset across higher-education institutions. The question arising from the above is how do COVID-19 induced disabilities affect the academic experiences of U.S. college students?

This report aims to shed light on the COVID-19 induced learning disabilities among college students in the United States based on a review of related literature and a descriptive analysis of secondary data. Specifically, we will discuss the identified learning disabilities that resulted from the pandemic and other contributory factors in light of existing literature. Finally, the paper concludes with a discussion of the strategies that may be useful in addressing the exposed learning disabilities.

IMPACTS OF COVID-19 ON COLLEGE STUDENTS

This section specifies what constitutes COVID-19-induced learning disabilities in this paper and reviews how these disabilities presented themselves among students during the pandemic. We utilize preliminary data from the Institute of Educational Sciences (IES) of the U.S. Department of Education (Cameron et al., 2021) complemented by recent studies to assess the enrollment impact of COVID-19 on undergraduate enrollment. Further, we examine the impact of COVID-19 on student academic performance and the related issue of academic integrity. Our goal is to frame our discussion in terms of how specific factors disabled some college students, which in turn impacted their enrollment and academic performance.

Defining COVID-19-Induced Learning Disabilities

Our paper defines COVID-19-induced learning disability as a learning disorder resulting from events surrounding the pandemic that affect a student's ability to perform to the highest academic potential or attain the minimum requirements for progression to the next stage of their academic pursuits. Within this context, we argue that a student's continued enrollment and academic performance would be impacted should they experience any of the COVID-19 related events. For instance, a student's enrollment and performance can be affected by changes in their academic circumstances, including a change in instructor, low feedback, inability to get the necessary technology, or changes in their health, economic, or family situation. Indeed, COVID-19 introduced changes to students' environment which also affected the student's ability to succeed.

Enrollment Impact of COVID-19

Before examining the underlying factors that affected student enrollment, we first review the impact of COVID-19 on undergraduate enrollment, primarily using preliminary data from the IES data¹. The IES preliminary data facilitates the assessment of most of the enrollment impact by type of institution, gender, and race. Next, we complement the assessment using the IES data with other research studies that also shed light on the enrollment impact of COVID-19 on U.S. college students. These additional research studies are useful in our analysis because they allow us to assess enrollment impact by income groups. Following this review, we highlight some of the factors contributing to the enrollment impact.

Enrollment Disruption

In general, 87.5 percent of undergraduate students in the United States reported they experienced enrollment disruption or change due to COVID-19. When broken down into types of institutions, a staggering 92.2 percent of undergraduate students in 4-year public institutions experienced enrollment disruption compared with 85.7 percent and 47.1 percent in 4-year private non-profit and 4-year private for-profit institutions, respectively. About 86.2 percent of students who identify as females reported they experienced enrollment disruption or change, slightly lower than the 89.3 percent and 91.1 percent reported by their male and genderqueer counterparts, respectively. In terms of race or ethnicity, Asian (not Hispanic or Latino) undergraduate students report the highest level of disruption at 93 percent compared with 89.4 percent, 86.3 percent, and 83.6 percent for Hispanic or Latino, White (not Hispanic or Latino), and Black or African American (not Hispanic or Latino), respectively.

Withdrawals from Institution

While the number of undergraduate students that withdrew from their institutions constituted 4.4 percent of the total number of undergraduate students, the withdrawal rate was above this average for all private for-profit institutions and less than 4-year public and private nonprofit institutions. The percentage of female students that reported they withdrew from their institution was slightly higher at 4.4 percent compared with 4.1 percent for their male counterparts. About 9.5 percent of undergraduate students who neither identify as male or female reported they withdrew from their institution. Compared with the withdrawal rates among Asian and White undergraduates of 2.9 percent and 3.4 percent, respectively, the withdrawal rates among American Indian or Alaska

1 The published dataset is a publication of the National Center for Education Statistics at IES. Dubbed National Postsecondary Student Aid Study (NPSAS:20), the estimates in the report represent undergraduate students who were enrolled in spring 2020 in NPSAS-eligible institutions and met NPSAS eligibility requirements.

Native and Black or African American undergraduates were highest at 11.7 percent and 7.2 percent, respectively.

It is too early to determine whether these reported withdrawals are temporary or permanent. However, should this linger, there would be an uneven impact on undergraduate students who identify as American Indian or Alaska Native and Black or African American and identify as female or genderqueer.

Leave of Absence from Institution

About 3.8 percent of the total number of undergraduate students reported that they took a leave of absence from their institution. While the percentages of students in less than 4-year public and private institutions reporting leave of absence from their institution were much higher than the 3.8 percent average, the problem was more pronounced in private for-profit institutions. In particular, 22 percent of undergraduate students in less-than-2-year private for-profit institutions reported taking leave of absence, compared with 9.7 percent and 10.3 percent reported by students in 2-year and 4-year private for-profit institutions, respectively.

While the percentage of male and female students reporting a leave of absence from their institution remained around the 3.8 percent average (i.e., 3.6 percent and 3.8 percent, respectively), about 8 percent of genderqueer students reported a leave of absence. Again, compared with white (3.1 percent) and Asian (2.3 percent) students, a relatively higher percentage of American Indian or Alaska Native (10.1 percent) and Black or African American (5.6 percent) students reported a leave of absence from their institution.

Change in Major Choice

In a survey of 1,564 students at Arizona State University in April 2020, 12 percent of respondents stated that COVID-19 impacted their major choice (Aucejo et al., 2020). But, perhaps, of immense concern from this particular study is the finding that lower-income students were 41 percent more likely to report that COVID-19 affected their major choice (statistically significant at the 5% level).

Underlying Factors Contributing to Enrollment Impact of COVID-19

Limited access to technological resources: Among the factors contributing to the enrollment impact include issues related to access to technological services for successful participation in remote learning. On average, 34.3 percent of undergraduate students reported they received technology or technical services from their institution. In addition, students who moved back home were likely to find themselves in situations where they had to share devices with other family members or encounter difficulties accessing the internet. Research shows that online learning is effective only if students have consistent access to computers and the internet (García & Weiss, 2020).

Transactional distance: Even when students had access to technological services, the feelings of isolation created by the transactional distance resulting from remote learning have implications for student motivation. Stavredes (2011) explains that physical separation leads to psychological and communication gaps, potentially creating misunderstandings between instructors and learners. The transactional distance thus requires specialized organizational and teaching procedures to minimize the feelings of isolation (Moore, 2013). Amid the abrupt end to face-to-face instruction, most traditional instructors scrambled to identify the best approaches for moving forward with instruction. Most of the traditional instructors had to develop these approaches within a few days or a week. In the particular case of instructors with little to no experience in the design of distance learning courses, the lack of meaningfully designed structure of remote instruction meant a greater likelihood of failure for motivating student learning and attaining successful learning outcomes.

Health and economic shocks: For some students, the additional burden from household responsibilities during the pandemic, particularly caring for family members (health shock) or taking other employment to supplement the family income (economic shock), has also impacted their enrollment. It is noteworthy that some students who experienced job losses, delays in receiving unemployment insurance benefits, or did not benefit from the federal stimulus packages are likely to experience financial distress. In a survey of 18,764 students on 14 U.S. campuses, conducted from late March through May 2020, two-thirds of students reported their financial situation has become more stressful (Martinez & Nguyen, 2020). Given the importance of finance for college education (Lovenheim, 2011; Perna et al., 2008; Solis, 2017), we can expect that the financial distress induced by COVID-19 is a factor explaining the enrollment impact of the pandemic.

Aucejo et al. (2020) suggest that the magnitude of economic and health shocks from the pandemic are not uniform across the student population. In particular, Aucejo et al. (2020), using a sample size of 1,446 students at Arizona State University in April 2020, find that lower-income students are 55 percent more likely to delay graduation than their high-income counterparts. More worrying is the finding from the study suggesting that health and economic shocks due to the pandemic explain 40 percent of the delayed graduation gap between lower- and higher-income students (Aucejo et al., 2020).

Mental health: Financial distress and feelings of isolation are important stress factors that affect most students' mental health. The vulnerabilities of students already struggling with mental health issues were aggravated during the pandemic. In addition, the stress factors induced by COVID-19 have been a catalyst for new mental health issues among students who previously had no mental health cases (Martinez & Nguyen, 2020). Indeed, heightened mental

health issues among college students during the pandemic have also been highlighted in other reports and studies (Brown & Kafka, 2020; Lederer et al., 2021; Minds, 2020; Perz et al., 2020; Son et al., 2020). Mental health issues have previously been associated with students' withdrawals from college (McMichael & Hetzel, 1975; Russell & Topham, 2012; Salzer, 2012).

Student Academic Performance

In the previous section, we identified the limited access to technological resources to participate in remote learning, the transactional distance resulting from the abrupt transition from in-person to remote instruction, the mental health impact, and the health and economic shocks from the pandemic as the underlying factors contributing to the enrollment impact of COVID-19 for college students. As a result, some students reported they withdrew from college or took leave of absence from their institution. It is important to note that even when students persisted in their education, their academic performance was likely to be adversely impacted should these factors affect their academic engagements.

Previous studies have shown that crises, in the form of natural disasters, conflict, or violence, generally tend to adversely affect students' academic performance (Boxer et al., 2020; Brück et al., 2019; Sacerdote, 2012). Conversely, a handful of studies that have examined the impact of COVID-19 on student academic performance find a positive impact of remote learning on academic performance (Gonzalez et al., 2020; Rodríguez-Planas, 2021).

A number of factors may explain why these findings conflict with previous studies on the impact of crises on students' academic performance. First, the pre-pandemic studies showing the adverse impact of crises on academic performance are mostly location-specific, whereas the COVID-19 crisis is global in nature and has a varying impact depending on one's ability to leverage the digitization resulting from COVID-19. Second, the difficulty of assessing students remotely mostly led to the use of low-stake assessments in place of high-stake assessments by most instructors. Third, even when instructors used high-stake assessments, students had an increased opportunity to engage in academic dishonesty because of the difficulty in proctoring online exams (Bilen & Matros, 2021). Some media reports have also documented the astronomical increase in cheating by college students (Hobbs, 2021; Lederer et al., 2021; Newton, 2020). Finally, some institutions offered greater flexibility in grading, potentially limiting students' abysmal performance on GPAs.

Other equally important factors that are likely to impact academic performance include the social isolation due to the absence of peer community, the sense of community made possible by isolating with family members, and the entrepreneurial drive fostered among students leveraging digital platforms to create and market their products.

Absence of Peer-to-Peer Learning Community

A major factor that influences student success in college is peer-to-peer learning. College students learn a lot from each other. Ajilore and Asiseh (2018) find that peers influence the weighted behavior of individuals. Sacerdote (2011), in a review of various studies, finds that peer effects from roommates and dorm mates contribute to student success in college. Alternatively, peer effects are also seen in negative behaviors such as drinking, smoking, and drug use. Additionally, it also might have reduced the incidence of students engaging in risky behaviors.

Sense of Community

Despite the devastating impact of COVID-19, it also brought students and their families together. Students suddenly realized the power of community and worked towards growing as a community. COVID 19 required that people should socially distance themselves from each other. Additionally, the repeated lockdown meant students had to stay with their families and close relatives. This allowed the students to form deeper and better relationships with their families. These kinds of family relationships also helped some students to cope with certain aspects of the pandemic. For example, Prime et al. (2020) argue that families adapt better in pandemics when they (1) identify that they are in the pandemic together, (2) current plight specific, time-limited, and not general, (3) resist forecasting worse case scenarios and (4) minimizing catastrophic thinking. Research also suggests that family relationships can foster student academic engagement (Allendoerfer et al., 2012; Furrer & Skinner, 2003).

Entrepreneurial Drive of Students Enhanced During Pandemic

While many businesses had to shut down during the pandemic, it also allowed others to leverage digital platforms to start their businesses or expand existing businesses with the ultimate goal of earning extra income. From interaction with students, we found that the pandemic gave some students the time and the opportunity to start their businesses. While in-person instruction seemed to be time-consuming, remote teaching and learning gave students some flexibility with time, and it also allowed them to focus more on their own business. This was made possible because the shift to an online learning system also meant students could study and work through a class at their own pace. Additionally, most faculty were encouraged to be more considerate with students, which meant that students did not have to put in as much effort as they would have in an in-person class. These flexibilities enabled students to take on extra jobs, which provided them with additional income and reduced some of the financial distress occurring due to the pandemic.

STRATEGIES FOR ADDRESSING THE COVID-INDUCED LEARNING DIS(ABILITIES)

The occurrence of a pandemic leaves lessons to be learned and also prepares us for the future. The COVID-19 pandemic is still ongoing, and even though all the challenges and impacts may not be fully known, there are lessons to be learned. While the impact of COVID 19 is long-term, these lessons must guide policymakers as they draft policies for the future. In light of the impact of COVID-19 on students discussed in the previous section, we provide some strategies for addressing the problems in the present and future.

One major impact of the COVID-19 health shock has to do with student assessment. How students are assessed is essential especially given that student assessment influences their future capital acquisition. Instructors may have to consider different assessment methods that will bring the best out of the students. The use of multiple means of assessments, including take-home exams, online proctoring systems, internships, provides better information on student performance.

With regards to studies showing that students change majors due to COVID-19-induced changes in the labor markets, higher-education institutions may need to consider improving courses to make them relevant for student success in the future. In particular, a college education must ensure that skills acquired from a college education must translate to work in real-world scenarios. Therefore, courses must adapt by introducing readily applicable content. Within this context, colleges need to create opportunities in their curricula that help students transition from their education to a career in the job market.

Technology has and still plays a pivotal role in education, especially during the pandemic. Both students and professors had to learn how to leverage digital platforms for teaching, learning, and conducting their business. The use of technology to teach and conduct business brings to the forefront issues such as cybersecurity, technology proficiency, and student access to the technological devices and internet to succeed in their education. Going forward, the role of technology in the classroom must be adequately addressed by policymakers. Institutions of higher education should also find ways by which they can define what the legalities are and what is considered acceptable.

The pandemic has impacted the mental health of both learners and instructors. Therefore, institutions of higher education should consider including mental health in the academic curriculum. Additionally, institutions of higher education must have an office where mental health issues can be reported and adequately addressed.

CONCLUSION

This paper reviewed the impact of the COVID-19-induced learning disabilities on the academic experiences of college students in the United States.

The preliminary findings suggest an uneven impact for students from specific communities. In particular, the data shows that the adverse effects of COVID-19 on academic experience were more significant on students from low-income, Black, and Native American communities.

Several factors which negatively impacted enrollment and academic performance include limited access to technological resources to participate in remote learning, the transactional distance resulting from the abrupt transition from in-person to remote instruction, mental health, and the health and economic shocks from the pandemic. In addition, the absence of peer-to-peer engagements from the imposed lockdowns negatively impacted students' academic experiences. However, other positive factors that may have minimized the negative impact include the sense of community fostered by isolating with family members and students' entrepreneurial drive boosted by leveraging digital platforms to start new or expand existing businesses.

Along with the pandemic, the induced learning disabilities present an opportunity for an educational reset. In addition to addressing the inequities associated with access to educational resources, policymakers would need to improve existing curricula and adopt measures to address mental health issues.

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