

Davidson College Educational Studies Working Paper:
Tracking Campus Responses to the COVID-19 Pandemic

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Abstract: American higher education institutions rapidly responded to the COVID-19 global pandemic. Between March 1st and April 4th, over 1,400 colleges and universities closed their doors and transitioned to online instruction. This paper uses a novel dataset and draws upon theories of institutional isomorphism to descriptively examine the trends in how higher education institutions responded to the Coronavirus pandemic. It finds little difference in institutional response based on campus infrastructure including, residence hall capacity, hospital affiliation, and medical degree offerings. There is some suggestive evidence, however, that institutions may have responded to external coercive isomorphic pressures from state governments and may have relied on a heuristic of peer institution closures to inform their decisions.

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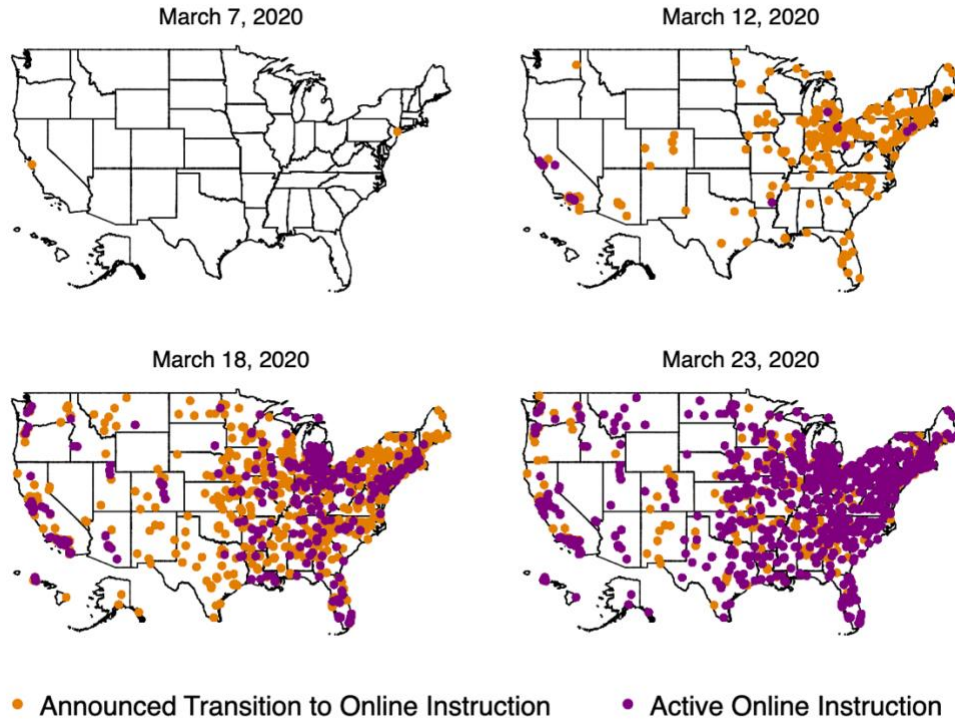
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Tracking Campus Responses to the COVID-19 Pandemic

The COVID-19 crisis continues to present challenges for educational institutions. Colleges and universities are not alone in making hard decisions in unstable times. American colleges and universities responded to the COVID-19 pandemic with varying strategies. Schools were forced to quickly make decisions to protect their campus communities, while consequently changing their entire methods of instruction. Issues associated with COVID-19 on higher education campuses include online learning techniques, student health and wellbeing, financial constraints, and more. It is crucial to understand how this unprecedented pandemic affects colleges and universities to best prepare for the future of American higher education. Understanding when and how schools responded provides the opportunity to strengthen our higher education institutions despite such devastation.

On March 6, 2020, Stanford University and Touro College became the first institutions in the country to announce transitions to completely online instruction due to the COVID-19 pandemic. Three days later, six colleges and universities in California, Connecticut, and Massachusetts followed. The next day, 78 institutions joined them. By the end of that week, just over half of all degree-granting private, non-profit and public 4-year institutions in the country announced transitions to online learning practices. By the end of March, nearly 1,400 institutions determined online delivery of coursework for the foreseeable future. While COVID-19 is the driving force for these decisions, institutional responses differed – likely due to

Figure 1: Geographic Spread of Online Instruction Transition



variances in institutional characteristics. This research brief analyzes a novel dataset and draws on the theories of bounded rationality and institutional isomorphism to speculate possible explanations for the swift implementation of online learning across so many institutional contexts.

Integrated Conceptual Framework:

In order to understand the trends in college and university closure decisions surrounding COVID-19, we used an integrated theoretical framework drawing on the concepts of bounded rationality (Simon, 1957) and institutional isomorphism (DiMaggio & Powell, 1983).

Bounded Rationality

Based on the work of Simon (1957), we argue that institutional leaders attempt to make rational decisions in support of their institutions. We argue that college and university leaders base their decisions on assessments of their own institutional capacity and on the decisions of their peer institutions. A rational college president knows the unique constraints facing their institution. That president would not know the spread or the danger of the virus, and therefore look for heuristics in determining the best decision. We argue those heuristics relate to isomorphic pressures.

Institutional Isomorphism

The neoinstitutional theory of institutional isomorphism argues that institutions will make similar decisions to one another in a never-ending search for legitimacy (Boxenbaum & Jonsson, 2008; DiMaggio & Powell, 1983). The theory has a long history of application in the field of higher education, specifically with respect to academic departments (Frank & Gabler, 2006), faculty time allocation (Milem et al., 2000), and the student affairs and civic engagement infrastructure on college campuses (Lounsbury & Pollack, 2001; Evans et al., 2019). DiMaggio and Powell (1983) detail several forms of institutional isomorphic change ¹ – coercive and mimetic

¹ DiMaggio and Powell (1983) also identify normative isomorphism. Normative isomorphism drives homogenization through professional networks; as professions seek legitimacy, they institute licensure and other requirements to maintain agreed-upon standards within their institutions. For the purposes of this paper, we do not discuss normative isomorphism given limited evidence of normative isomorphic pressures in our data. However, understanding that many closure decisions likely spread through institution presidential networks. It is plausible to assume that Presidents, maintained significant contact with each other, yet, our data does not provide opportunities for this possibility. Furthermore, for future researchers, we recommend a deeper analysis including even more factors to provide more specific trends and conclusions that have yet to be examined.

isomorphism in particular may apply to the context of COVID-19. Coercive isomorphism occurs when an external force pressures an institution into homogenization. Mimetic isomorphism occurs normally in times of uncertainty when organizations model their behavior after aspirant peers; uncertainty breeds imitation.

A number of organizational and field level trends may predict isomorphic change (DiMaggio & Powell, 1983). Institutions facing uncertainty will mimic institutions they perceive as successful. Fields that constantly interact with the state are likely to experience isomorphism. The fewer the successful models and the greater the technological uncertainty, the higher the rate of isomorphic change. Given these trends, we examine the role of institutional isomorphism in the response of colleges and universities to the COVID-19 pandemic.

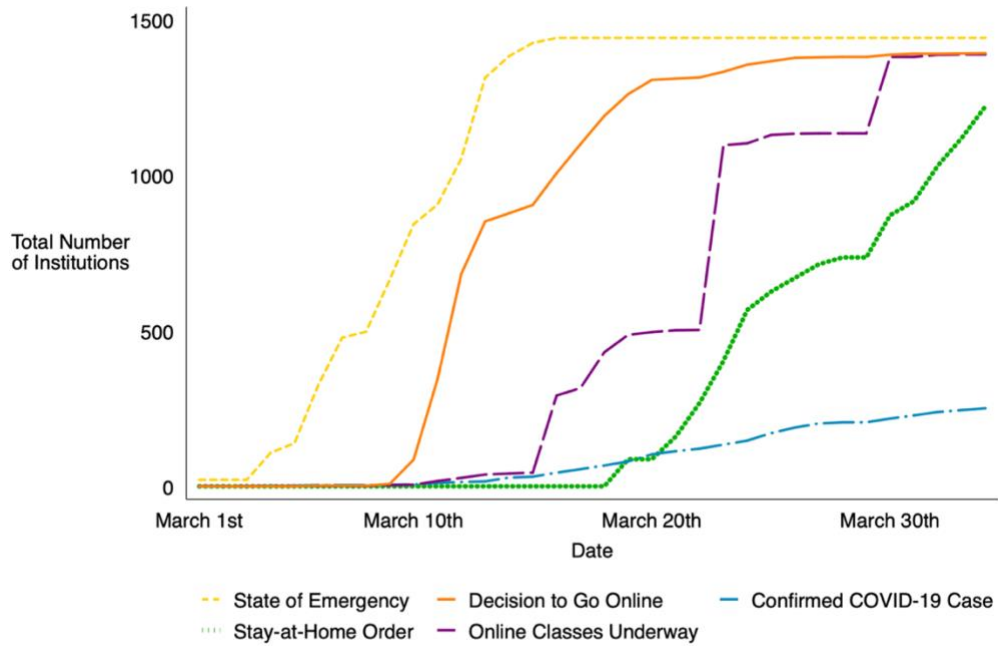
Data Collection and Procedures

We compiled data from a variety of sources, including the Integrated Postsecondary Education Data System (IPEDS), the *New York Times*, and institutional websites. We confined our dataset to Title IV-aid receiving, four-year, non-profit and public colleges and universities in the doctoral, masters', and baccalaureate Carnegie classifications. We excluded special focus baccalaureate institutions such as bible colleges, music conservatories, and military academies. Additionally, we omitted baccalaureate institutions that grant primarily associate degrees. We gathered campus decision data using each institution's COVID-19 resource webpage, news updates, and social media postings. Data collected from institutional sources included indicators for

whether an institution moved to online learning and whether they made the decision during spring break; if they extended spring break; the date online classes began; commencement cancellation or alternative plans; and the date of the first confirmed case on campus. We collected the date each governor declared a state of emergency and/or instituted a stay-at-home order from the *New York Times* COVID-19 website (Mervosh et al., 2020). Lastly, we collected *U.S. News & World Report's* 2020 rankings of national liberal arts colleges and national universities. Our complete dataset included information for 1,442 institutions in all fifty states and the District of Columbia between March 1st and April 4th.

In order to confirm accuracy of the website data collection, each author conducted a set of spot-checks to conclude the data collection portion of this project. We gathered data for a randomly assigned group of ten institutions and cross checked our results. To ensure extra precautions, no author revisited the data they collected, instead we confirmed each other's data sets. During our spot-checks, each author made a small number of corrections to update the dataset. No author made changes to more than 3.75 percent of the spot-checked data. Most of the inaccuracies were due to a status change from the time of the first data collection and the spot-check (i.e. a cancellation of commencement that occurred after data collection, but before the spot-check).

Figure 2: Trends in State and Institutional COVID-19 Responses



Data Sources: Authors’ collection from institutional websites. New York Times COVID-19 Database.

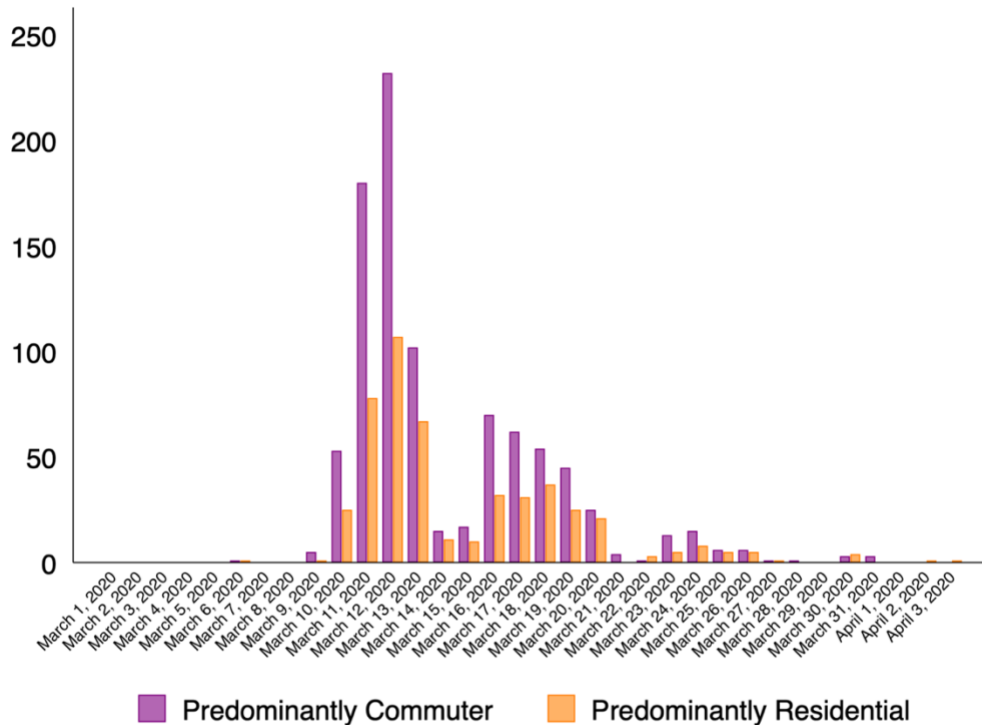
Trends in COVID-19 Responses

Figure 2 shows the cumulative actions colleges and universities took in response to COVID-19 during March and into April 2020. It also shows state action. The yellow and green lines represent the cumulative number of institutions in states that have declared a state of emergency or issued a stay-at-home order for a given day in the time period. The orange line represents the cumulative number of institutions at a given time that announced the transition to online-only instruction. The purple line shows the number of institutions for which online instruction is underway. Sadly,

the blue line represents the cumulative number of institutions that announced at least one confirmed case of COVID-19. At the time of writing, 272 institutions in 38 states have at least one confirmed case. While it is possible that confirmed cases – and not isomorphic pressures – could drive a campus to close, only 38 of the institutions that moved to online-only education did so after their first confirmed case. On average, institutions that reported confirmed cases did so nine days after their decision to transition to online-only education. While the threat of the virus is very real, *imminent* threats of members of campus communities contracting the virus likely did not end in-person instruction.

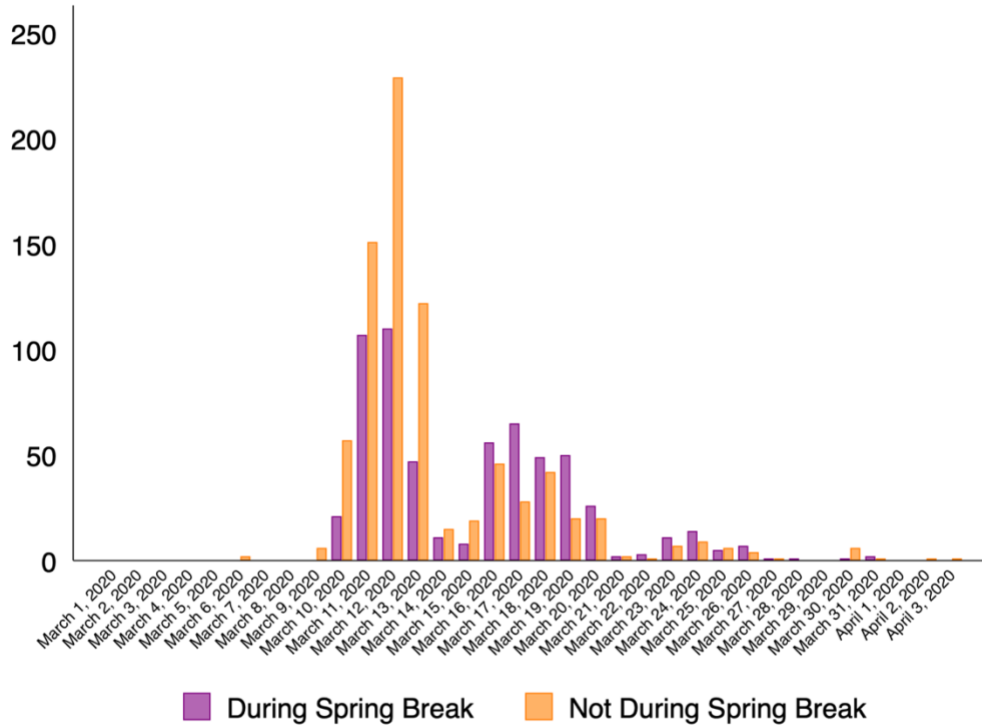
The initial motivation behind campus closures may come from an institution's ability to properly quarantine and care for students resident on their campuses. As a proxy for residential campus status, we use the ratio of total enrollment to residence hall capacity. We see no discernable descriptive difference between institutions based on the enrollment to residence hall capacity ratio. Figure 3 shows the distribution of the date institutions decided to transition to online instruction split into two groups. The purple bars represent institutions for which the ratio of enrollment to residence hall capacity is less than or equal to 0.5. Orange bars represent the institutions for which the ratio is greater than 0.5. Despite great differences in the number of institutions in each category (two-thirds of the institutions in our sample have residence hall capacity ratios of under 0.5), note the similarity in the distribution of decision and online instruction dates.

Figure 3: Transitions by Enrollment-to-Residence Hall Capacity Ratio



In understanding why campuses closed the way they did, it is crucial to note each campus' dates of their spring break vacation. Figure 4 depicts school closures related to individual institution's spring break dates from March 1st - April 4th. The purple bars represent schools that decided to go online during their breaks and the orange bars show schools that made that transition outside of spring breaks. We found that 57 percent of schools decided to close either before or after their spring recess. Only 43 percent declared a closure not during spring break. One possible, likely explanation for these trends is the pre-planned timing of each break.

Figure 4: Transitions by Spring Break Status



Institutions with hospitals and those offering medical degrees might have responded differently than those that do not. Due to the increased safety precautions and stretched resources, such institutions may be likely to close earlier to increase their abilities of fighting COVID-19. Of the 46 institutions in the dataset that had hospitals on campus, 32 of them (around 70 percent) announced transitions to online education by March 12th. All institutions with hospitals made online transition commitments by March 18th. The majority of non-hospital institutions decided to move online during the same period, with just around 50 percent of non-hospital closures happening

before March 12th, and 85 percent happening before March 18th. For both non-hospital and hospital-affiliated institutions, the modal start date for online course delivery was March 23rd.

Similarly, we find no major differences between institutions that grant medical degrees and those institutions that do not. The modal online decision date for medical degree granting institutions was March 11th; it was March 12th for those that do not offer medical degrees. The modal date for online delivery was again March 23rd for both institutions.

While institutional leaders did have full information on their campuses' capacity for care, they did not have perfect information as to the severity of the virus. Because the dangers of COVID-19 were – and still are – unclear, campus leaders needed to look for heuristics to help legitimate their closure decisions and likely experienced isomorphic pressures.

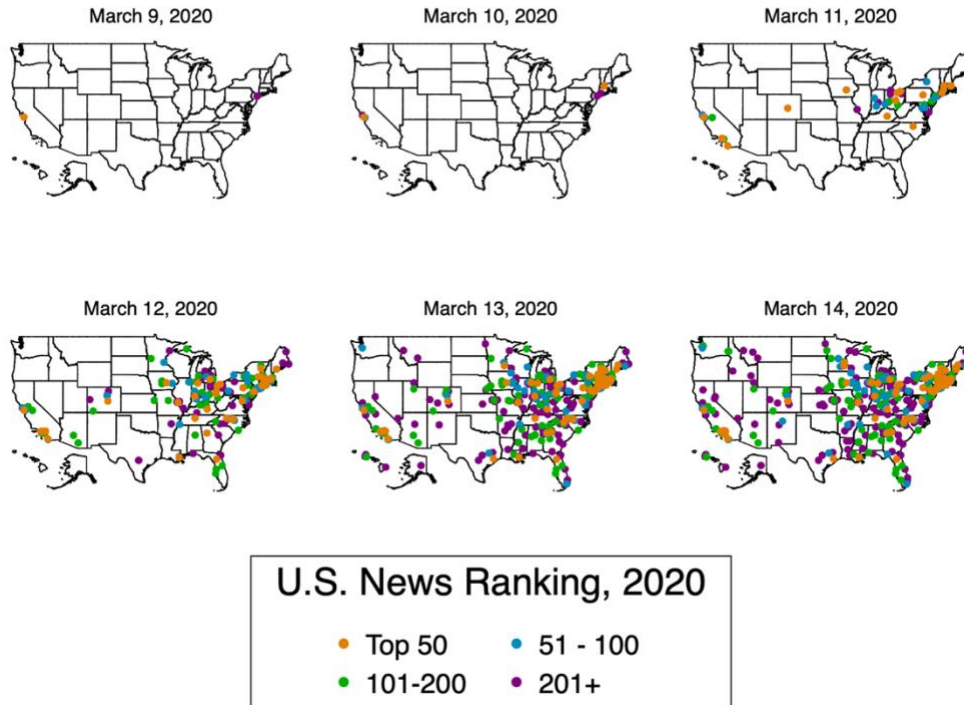
Institutions may have experienced coercive isomorphic pressures as Governors instituted states of emergency declarations and stay-at-home orders. If such were the case, we might see evidence of colleges and universities moving online in the wake of gubernatorial actions. While 90 percent of institutions announced a shift to online learning before California Governor Gavin Newsom instituted the nation's first COVID-19-related stay-at-home order on March 19th, only 21 of the 1,442 institutions in our dataset declared their intentions to transition to online education prior to a gubernatorial state of emergency declaration. Most schools closed

following state-level state of emergencies and were already closed at the start of their states' stay-at-home orders. The average time between a state-level state of emergency order and the decision to end in-person instruction was 4.73 days. Some state of emergency orders explicitly forced institutions to end in-person instruction. For example, Governor Phil Murphy of New Jersey announced on March 16th that all higher education institutions in the state would close by March 18th. Such mandates, or even less explicit suggestions by governors likely prompted a shift to online learning for institutions across the country.

The response to COVID-19 represents a monumental shift. During uncertain times, institutions look to each other when developing their responses. Figure 5 shows at the spread of campus closures across institutions present in liberal arts and national university rankings. On March 10th and 11th, most of the institutions that decided to move to online instruction were those in the Top 50 of the *US News* Liberal Arts College and National University rankings, with other institutions following suit in subsequent days. Institutions looking to prestigious peers for heuristics may, therefore, have experienced mimetic isomorphic pressure to transition online.

Institutions might model their responses after campuses facing similar challenges, therefore, we might observe geographic trends and institutions respond to the prevalence of COVID-19 in their specific areas. The geographic spread of campus closures lends some credence to this possibility as online transition commitments started on the coasts and then moved to the center of the country.

Figure 5: Geographic Spread of Online Instruction by US News Rank



Conclusions

Our study determines when and how institutions responded to COVID-19 in the months of March and April 2020. Institutions broadly transitioned to online learning during the second week of March, possibly as a result of isometric pressures. As the pandemic evolves, that is unlikely to change. Coercive and mimetic isomorphic pressures, along with constant re-assessments of student, faculty, and staff safety will likely dictate when campuses re-open and how institutions maintain academic standards while operating remotely. Campuses that do not open will wrestle with how

best to prepare faculty and students for online instruction in the long-term. Those that open will need to come up with phased plans for student reentry to campus. Regardless of their decisions to open or remain online, campuses will need to tackle financial pressures. If institutional responses to the advent of the COVID-19 pandemic are any indication, such decisions will rely on isomorphic pressures such as heuristics for institutional decision-making. Whether dictated by a state actor through coercive isomorphism, or simply following prestigious institutions in a mimetic fashion, the responses to the pandemic will likely look fairly similar, regardless of institutional type or capacity.

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