

Homeland Security Academics Adapt to the COVID-19 Pandemic

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The *Journal of Security, Intelligence, and Resilience Education* (JSIRE) asked academics from homeland security and related fields to share how they and their institutions of higher education managed the COVID-19 crisis. Academics from 15 institutions of higher education with a homeland security or related field of study and one professional academic association answered this question in the accompanying essays of this Special Edition. The accompanying essays represent institutions of higher education from the United States as well as Australia, Canada, India, and Italy, and include colleges and universities in addition to a community college, a law school, a medical college, a historically Black College or University, an Alaska Native and Native Hawaiian–Serving Institution, a U.S. military institution, and FEMA’s higher education program.

This article presents a rapid review, coding, and synthesis of the 16 essays (Braun & Clarke, 2006; Silver & Woolf, 2018). Three prominent themes emerged from the essays: “student(s),” “course(s),” and “community.” This article begins with a brief summary of the COVID-19 pandemic followed by a methodology section that delineates the rapid review and coding process. The results and discussion sections provide prescient insights into the behind-the-scenes activities of academics and their institutions during what is likely the greatest challenge of our times.

COVID-19 PANDEMIC

The COVID-19 pandemic has proven to be the most significant global event since World War II. On March 11, 2020, the World Health Organization characterized the COVID-19 epidemic as a pandemic (World Health Organization, 2020). Considered by many to be a massive societal failure with implications for all aspects of civilization and future generations (Dahl, 2020; Fernandes, 2020; Haleem, Javaid, & Vaishya, 2020; United Nations, 2020), the pandemic challenged nearly every facet of our lives. As of December 18, 2020, there were over 75 million reported COVID-19 cases globally, of which 1.6 million cases were fatal (John Hopkins University of Medicine, 2020). In December 2020, government officials in the United Kingdom and the United States approved two COVID-19 vaccines and have commenced public vaccinations (Medicines and Healthcare Products Regulatory Agency, 2020; U.S. Food & Drug Administration, 2020).

The impacts of the COVID-19 pandemic on colleges and universities have been significant. Financial losses to an already beleaguered industry are estimated to exceed \$120 billion due to decreases in enrollment, financial aid (government and private), and event revenue as well as unanticipated costs such as contact and tracing, sanitation and hygiene, and information technology (Nietzel, 2020). The impacts of the pandemic extend well beyond the financial to

institutions of higher education, and to a great extent may have the most profound impacts upon our student populations. Numerous higher education publications, including the *Chronicle of Higher Education*, *Inside Higher Ed*, and *Times Higher Education* have dedicated significant amounts of space in addressing the COVID-19 pandemic and its larger impacts to the broader aspects of higher education. An internet query identified more than 3,000 articles on financial impacts, enrollment, student safety, transitioning to OL education, and campus closures.

METHODOLOGY

Issue numbers two through 16 of this volume were inductively analyzed and coded using a *rapid review process* and *thematic analysis* applying NVivo (version 12/Windows), a qualitative data analysis computer software package. The rapid review process is a form of knowledge synthesis that accelerates the process of conducting a traditional systematic review through streamlining or omitting a variety of methods to produce evidence in a resource-efficient manner. While a rapid review is not as in-depth an analysis as other methods, it remains a systematic assessment with a basis in the scientific method (Hamel et al., 2020). Thematic analysis is a method for identifying, analyzing, and reporting patterns (themes) within data. The process minimally organizes and describes data in rich detail. The analysis, however, often goes beyond organization and description and interprets various aspects of the research topic (Boyatzis, 1998; Joffe, 2012; see also Krippendorff, 2018). This study employed Braun and Clarke's (2006) six-phase thematic analysis process that includes:

- Step 1: data familiarization
- Step 2: generating initial codes
- Step 3: searching for themes
- Step 4: reviewing themes
- Step 5: defining and naming themes
- Step 6: write up

As noted by Maguire and Delahunt (2017), the steps to thematic analysis are not necessarily linear. In practice, they overlap one another in order to permit the iterative evaluation of data.

NVivo's auto code feature was used to conduct a rapid review of the essays and to uncover the major themes from the essays. NVivo has been used in qualitative research to conduct thematic analysis to better understand data resulting from interviews (Joffe, 2012), surveys and marketing data (Ishak & Bakar, 2012; Oliveira, Bitencourt, dos Santos, & Teixeira, 2016; Wong, 2008), and journal articles (Boyatzis, 1998; Krippendorff, 2018; Saldana, 2015). NVivo served as an ideal tool to conduct this analysis and specifically to integrate Braun & Clarke's (2006) framework. The six steps of the framework were used to develop the analysis and the examination of the data from the 16 essays.

Data Familiarization (Step 1). Each essay was read separately to manually assess and identify core themes. Step 1 revealed some inconsistencies in some of the essays. While authors were asked to write their essays according to a matrixed series of questions/prompts relating to how they and their institutions adapted to the COVID-19 crisis (JSIRE, 2020), several authors

deviated from the matrix. Consequently, there was a discernible variability in the framing of how different colleges and universities adapted to the pandemic.

Next, the essays were sterilized. Each essay was cut and pasted to a new Word document to ensure that track changes, comments, and other artifacts that remained from earlier editing were removed. In addition, the titles and reference sections were removed to eliminate duplicative content that might skew word frequencies. The new word document (hereafter the “base document”) served as the primary source material and was accompanied by 16 individual essays that supported the analysis. Maintaining two separate documents provided a quality check of the analysis.

Generating Initial Codes (Step 2). The base document was imported to NVivo. In addition, the individual essays were imported into NVivo as separate documents after they were sterilized in the same manner as described in Step 1. After an initial word frequency query to determine the presence of the most commonly found words, it was determined there were no differences between the query of either the base or individual essay files. Notably, “stop words,” or common words not meaningful to the analysis, were removed by default by NVivo during the screening process. Some stop words, other than those that are contained by default, were added during the initial screening process to ensure that either the names of certain schools or other artifact words would not skew the analysis.

Searching for Themes (Step 3). Step 3 served as the basis to conduct the analysis that produced the themes using NVivo. NVivo’s auto coding feature analyzed the base document utilizing a language pack to develop themes and develop broader ideas and references (NVivo, n.d.). Themes appear as single words with supporting phrases/words representing the multiple intersections where the themes and their supporting phrases/words appear in the essays (see Table 1). Advanced coding to develop themes can be helpful to analyze large amounts of data in a short period of time (Jackson & Bazeley, 2019).

Table 1. Top three themes and supporting phrases/words

Themes			
	Students	Course	Community
Supporting Phrases / Words	International students	Course delivery	Community transmission
	Total student population	Prerequisite introduction course	Community colleges
	Student body	Introductory law courses	Teaching community
	Traditional students	High level research course	Enterprising communities
	Student expectations	Course work	Community members
	Student concerns	Course week	Responder community
	Student cohort	Fulfilled course requirements	Global community
	Taking student access	Course migration	Campus community
	Student organizations	First semester orientation course	
	Often students	Course assessment	
	Feeding students		
	Alerted students		
	Student isolation		
	Low-income students		
	Student fees		
	Keeping students		
Accommodating students			

RESULTS

To remain consistent with the process, Step 4 (reviewing the themes) and Step 5 (defining and naming themes) were reserved for the results section. In preparing to auto code the most prevalent themes, a word frequency count was generated by NVivo. The word frequency process was conducted to screen out stop words and ensure that terms which had no relevance to the analysis would be excluded. A word frequency query was performed to identify words used most frequently across the 16 essays. A word cloud composed of the top fifty most frequently used words serves to illustrate the difference word usage (see Figure 1). Words presented in the word cloud are proportional in size to the frequency in which they were used.

Figure 1. Word cloud for top 50 words



The 50 most frequently used words ranged from “students” ($n = 320$) as the most commonly used word to “services,” ($n = 34$) (see Table 2).

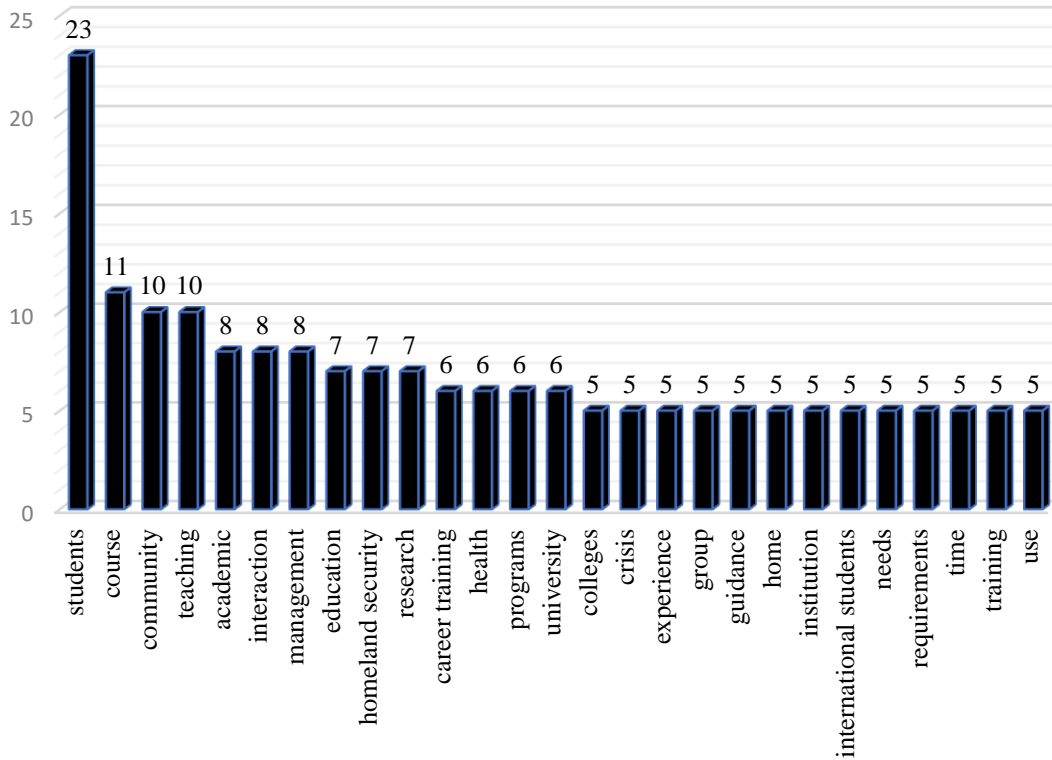
Table 2. Top 50 most frequently used words

No.	Word	Count	No.	Word	Count
1	students	320	26	programs	58
2	COVID-19	178	27	online (OL)	57
3	faculty	152	28	fall	55
4	university	142	29	crisis	53
5	learning	111	30	homeland	52
6	classes	98	31	HSEM	52
7	teaching	93	32	school	52
8	f2f	91	33	class	50
9	pandemic	89	34	march	48
10	program	88	35	support	46
11	semester	86	36	zoom	43
12	student	86	37	traditional	42
13	courses	85	38	platforms	41
14	course	83	39	social	41
15	campus	78	40	delivery	40
16	college	75	41	research	40

No.	Word	Count	No.	Word	Count
17	health	67	42	emergency	39
18	security	66	43	remote	38
19	education	65	44	universities	38
20	staff	65	45	higher	37
21	management	62	46	virtual	37
22	public	62	47	work	37
23	spring	61	48	challenges	35
24	community	59	49	transition	35
25	face	59	50	services	34

Reviewing the Themes (Step 4). NVivo filtered words and phrases associated with given themes to generate frequency data. The NVivo auto coding process generated 27 separate themes across the breadth of the 16 essays. Of the 27 themes, “student(s)” registered most frequently ($n = 23$) and “use” registered the least number of times ($n = 5$). See Table 3.

Table 3. Auto-coded theme results



Defining and Naming Themes (Step 5). As each theme had supporting phrases/words that connected to the references made within the essays, each theme comprised anywhere from several supporting phrases and words to only a few. The number of references for a given theme was indirectly correlated to the number of supporting phrases or words for which a theme is constructed. Consequently, the number of references and the corresponding number of supporting phrases and words found within the 16 essays varied. Variation may occur as individual essays may reference a phrase or word numerous times. Conversely, a theme may have a unique phrase or word that is used a single time. For instance, the phrase “community college” was referenced numerous times within the 16 essays, while “campus community” had only one specific reference.

In presenting information drawn from the theme development process, the exploration of the themes revealed was limited to the top three most-referenced themes: student(s) ($n = 23$), course(s) ($n = 11$), and community ($n = 10$). A supporting list of the phrases/words associated with the three themes reviewed can be found in Table 4. The basis for the follow-on discussion as part of this analysis centers on the top three themes as revealed by the auto-coding process and consequently shift to a summary of the narratives as they developed within the 16 essays.

Table 4. Top three themes and supporting phrases/words

Students	Course	Community
International students	Course delivery	Community transmission
Total student population	Prerequisite introduction course	Community colleges
Student body	Introductory law courses	Teaching community
Traditional students	High level research course	Enterprising communities
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Feeding students		
Alerted students		
Student isolation		
Low-income students		
Student fees		
Keeping students		
Accommodating students		

DISCUSSION—A DISTILLATION OF THE TOP THREE THEMES

Write Up (Step 6). This section details the identified themes and the context in which they were used. The distillation of the themes highlights the perspectives that were provided from the essays and their authors. This discussion was limited to the top three themes to produce a brief summary of the experiences academics and their institutions faced during the COVID-19 pandemic. Surely, other experiences and themes particular to any of the 15 colleges or universities or FEMA’s higher education program should not be discounted as invalid or not worthy of further examination elsewhere.

Student(s)

The most prominent theme revealed from the analysis of the essays was “student(s),” with a total of 23 references and 17 supporting phrases/words (see Table 3). References related to student(s) included international students, student migration from face-to-face (F2F) to online (OL) instruction, student engagement, student isolation, and student concerns. Numerous essays focused on both concerns for and needs of international student(s). Colleges and universities were acutely aware of the special needs of their international students such as travel restrictions, residency requirements, financial hardships, and visa status. The migration of the vast majority of F2F classes to OL platforms led to concerns about student engagement, isolation, and psychological wellbeing. Colleges and universities focused on engaging students through a variety of faculty and staff outreach initiatives. At the same time, some students were discernibly more engaged in OL classes than they were in F2F. To alleviate student concerns about OL course delivery, nearly all colleges and universities modified their traditional letter grading to a pass/fail option and extended course withdrawal dates. Finally, many colleges and universities considered the efficacy of future OL programs to minimize student costs.

Course(s)

The second most prominent theme was “course(s),” with a total of 11 references and 10 supporting phrases/words (see Table 3). References related to courses included “course content,” “course work,” “course assessment,” and “course delivery.” “Course delivery” was at the center of several essays regarding F2F courses, OL courses, a parallel issue regarding course content, and the transition of courses from traditional F2F classroom to OL platforms as the pandemic initially took hold.

An interesting perspective provided as part of a “first-semester orientation course” demonstrated the value of the thematic development process by revealing numerous reasons for OL, F2F, and hybrid courses and evolving capabilities. One essay noted that the ability to provide hybrid with synchronous F2F delivery could better support students across multiple time zones including students in foreign countries. Similar OL platforms supported student advising and course enrichment.

One article argued that as courses move OL, the administration of exams and course assessment will need to be modified. Another article underscored that OL lab courses will require new

approaches. Finally, in observing the phrases and words associated with “course(s),” there were numerous intersections where Zoom, Microsoft Teams, and Google Meet supported OL course delivery. The integration of these new tools enhanced OL course delivery and the ability to support the mass movement of traditional F2F courses onto OL platforms. While challenges were mentioned as part of the transition, the videoconferencing platforms provided an efficient manner in the transition from F2F to OL course delivery. Another intersection explored with the theme of “course” was found in the multiple overlaps of numerous learning management systems such as Canvas, Blackboard, and Google Meet, all of which were used to support OL courses.

Community

“Community” as a theme was the third most prominent, with a total of 10 references and 8 supporting phrases/words (see Table 3). References related to “community” included “community college,” “community transmission,” and “teaching community” as well as “responder,” “campus,” and “global communities.” The use of “community” was more diffuse than “student(s)” and “course(s)” and resulted in a limited overlap of supporting phrases/words between the essays. What provided for the term “community” to be coded as prominently as it was, came down to multiple standalone uses of the term across the 16 essays.

The phrase “community college” was referenced in several essays, indicating that multiple programs had a direct or indirect tie to community college or trade school. Only one of the schools was a community college, which explains the use of the theme in this context.

The use of “community” appeared in a variety of contexts within the scope of the essays, indicating a communal use of the theme. This was observed in manifestations such as “teaching community,” “responder community,” “campus community,” “global community,” “enterprising communities,” among others.

CONCLUSION

The rapid review was a uniform and consistent process in which a collective set of themes was developed. The results will lead to a more extensive discussion on the challenges, adaptations, and impacts of the COVID-19 pandemic on students, academics, and their institutions.

The top three themes of student(s), course(s), and community were relatively common considerations from across the spectrum of essays reviewed. These considerations were universal among the various institutions represented in this volume. A more in-depth examination of these themes in a post-pandemic environment may yield significant variances from these findings. It would be ideal to further explore the similarities and differences between institutions of higher education in the United States and abroad. A more expansive examination could likewise take place in order to broaden the number of themes discussed. The result of a broader review would serve to support an even larger comparison between disciplines to compare and contrast not only shared concerns and challenges revealed by the pandemic, but perhaps also provide a way ahead for a collective response the next time a pandemic or other major disruption occurs.

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