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Update of the COVID-19 Higher Education Literature Database (CHELD v2)

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Introduction

The year 2020 was the most challenging year for global contemporary higher education. Universities were rapidly thrown into an emergency online teaching paradigm. While we were all in the same boat, the coronavirus (COVID-19) pandemic highlighted the differences between the figurative staterooms and steerage in higher education. The digital divide, across capabilities, technology, and connectivity, meant students could not continue their learning journey, educators were unable to engage with learners, and organisations were unable to support their staff and students. The difference between institutions with adaptive and agile crisis leadership and those without was evident (Bavik et al., 2021). This saw dichotomies of empowered staff and those that missed opportunities for professional learning, digitally capable graduates compared to students not meeting graduation requirements, and rapid policy changes protecting staff and students contrasted with at risk staff and students through the ongoing requirement to teach on campus. Other differences reported by the earliest global analysis of higher education (see Crawford et al., 2020) included innovations in curriculum delivery and assessment, a decrease in international enrolments and engagement, support of research activities, and partnerships across higher education institutions and with industry and peak bodies.

There was a rapid increase in journal articles being published in 2020 (Palayew et al., 2020). This was largely attributed to the need to quickly disseminate research findings about COVID-19 and a pandemic environment not previously experienced with such widespread impact. And with this increase in literature came the need to synthesise this information through literature reviews and meta-analyses. With the launch of websites, such as the National Library of Medicine (2020) LitCovid, and the Centers of Disease (2020) Database of COVID-19 Research Articles, which later became part of the World Health Organization (2020) COVID-19 database, Butler-Henderson et al., (2020) identified the need for a database specifically related to higher education teaching and learning. The COVID-19 Higher Education Literature Database (CHELD) was developed to assist researchers with the publication of systematic literature reviews by completing the first step in a systematic literature review for them. The CHELD followed the PRISMA approach for article selection (Moher et al., 2009), as summarised in Figure 1, for all published journal articles about COVID-19 learning and teaching in higher education up to 30 June 2021.

The CHELD Version (v) 1 website has been accessed 789 times between August 2020 and May 2021, with the database downloaded 165 times during the same time (Institute of Research Innovation, 2021). The publication about the CHELD v1 (Butler-Henderson et al., 2020) has been viewed 535 times and cited 19 times during the same time period. Similarly, the ResearchGate version of the paper has been viewed 536 times, and the database downloaded 180 times. The CHELD v1 contained 137 articles (and one duplicate) published in the first six months of 2020. Compared to other disciplines, there was not the rapid publication of higher

Figure 1. CHELD article selection process (Butler-Henderson et al., 2020, p. 3).

education literature (with a few exceptions). Therefore, it was imperative for the authors to update the CHELD with the literature from the second part of 2020.

The purpose of this short communication is to provide an update to the first version of the CHELD to encompass six additional months of the literature on COVID-19 within the higher education discipline. The value in doing so is to provide a new snapshot of the progressive response to COVID-19 by the higher education sector. This database provides easy access to a rigorous and valid assessment of manuscripts that discuss the response to COVID-19 within universities and other tertiary institutions.

Methods

The method adopted by this systematic review has been previously described by Butler-Henderson et al. (2020), and has been replicated here to update the CHELD. All journal articles published in 2020 in either of the four following sources were considered: (1) Academic Search Ultimate, EBSCO, IEEE Xplore, Informit Online, Ovid, Proquest, ScienceDirect, Scopus, and Web of Science; (2) Google Scholar; (3) the first 100 journals in the Scimago (SJR) "Education" category; and (4) any journal that published at least three papers selected through the first two methods, using the search string in the title and abstract: [higher education OR university OR college] AND [COVID OR coronavirus]. The process of article selection was using the Covidence® online software, as per Butler-Henderson et al. (2020). The difference between Version 1 and 2 applies to the data extraction stage. Responding to feedback from users of the CHELD, the quality assessment score was removed from CHELD 2. We recognise that this variable is only used in certain disciplines and its inclusion in CHELD v1 meant some disciplines were unable to use the CHELD. As a database of all disciplines in higher education, the CHELD aims to not be exclusive and this amendment in Version 2 aims to rectify this. Following publication of the CHELD v1, the authors undertook a thematic analysis of the 137 articles. However, whilst it was intended to update the CHELD with these themes, it was also recognised that there may be differences across disciplines, and as such not included in CHELD v2. An addition to CHELD v2 is the full reference using APA 7th edition for each record, to simplify the referencing process for users of the CHELD v2. The CHELD v2 is available at [https://doi.org/10.37074/jalt.2021.4.1.22d].

Results

There had been a rapid increase in publications in higher education related to learning and teaching in the six months since CHELD v1 was undertaken. Table 1 shows the difference in each PRISMA stage for CHELD v1 compared to v2. The number of articles (738) included in CHELD v2 is more than a five-time increase in just six months.

Table 1. Difference in article numbers at each PRISMA stage for CHELD v1 versus v2.

PRISMA stage	CHELD version 1	CHELD version 2
Time period	1 Jan – 30 Jun 2020	1 Jan to 31 Dec 2020
Identification (after removing duplicates)	3,945	12,919
Selected titles and abstracts	371	2,144
Selected full-text articles	137 (+ 1 duplicate)	738

Where the month of the article when first published (including online first) was available (528 articles), the greatest number of publications were in June (88, 16.7%), followed by September (82, 15.5%) and November (68, 12.9%). The majority (153, 20.7%) of articles published were either about institutions in the U.S. or, were an opinion piece from U.S-based authors, followed by India (41, 5.6%), and Saudi Arabia (33, 4.5%). Articles were published from 92 different countries, and 42 (5.7%) of article were from more than one country. The heat map shown in Figure 2 shows the distribution of publications across the world.

Figure 2. Heat map of geographical distribution of publications.

CHELD v1 (Butler-Henderson et al., 2020) cited a yet to be published proposed framework to measure the stage of pandemic response for higher education institutions. These stages are: 1. Rapid adaptation ("to rapidly adapt core business for the new context"), 2. Improvement ("to optimize the adapted core business to improve quality and begin to consider non-core activities"), 3. Consolidation ("to evaluate pre-pandemic measures of social, economic, and environmental success"), and 4. Restoration ("to determine what a return to business-as-usual looks like, and how it can occur": Crawford, 2020, cited in Butler-Henderson et al., 2020, p. 14). In CHELD v2, the majority (519, 70.3%) of articles indicated most institutions are still at the stage 1 rapid adaption stage, with 19.1% (141) at stage 2 improvement, 7.7% (57) at stage 3 consolidation, and only 2.8% (21) of articles indicating their institutions are at the stage 4 restoration. An analysis across the year shows that whilst there has been growth in stage 2 improvement throughout the year, most articles implied they have yet to transition into stages 3 consolidation and 4 restoration.

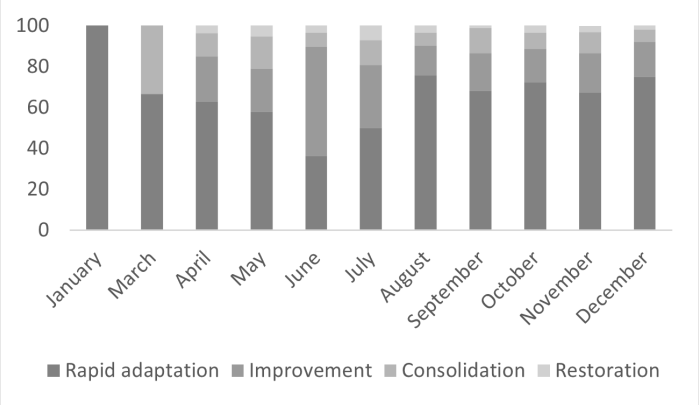

Figure 3. Distribution of stages of response across the year.

The type of articles range from empirical research (for example, survey, evaluation, interview), practice (for example, case study, autoethnography, practice report), and theoretical pieces (opinion, commentary, reflect, review), as summarised in Table 2. An analysis of the shift in these categories across the year (Figure 4) shows an increase in research papers as the year progressed. The types of studies were relatively evenly distributed across quantitative (176, 39.4%), qualitative (128, 28.6%), and mixed (143, 32.0%). The majority of article were about students (334, 53.4%), with nearly a quarter (154, 24.6%) about staff and 21.4% (134) about staff and students. Only three (0.5%) were about engagement with community related to teaching and learning. Most papers were published in the areas of health (108, 36.0%) and STEM (96, 32.0%).

Discussion and conclusion

This short communication reports on the research on COVID-19 and teaching and learning in higher education, published between 1 January 2020 and 31 December 2020. For educators, the COVID-19 Higher Education Literature Database (CHELD) is an important resource to enhance the understanding of how learning and teaching

Table 2. Summary of article characteristics.

Article characteristic (number of articles)	Type	Number	Percentage
Article type (738)	Action research	9	1.2
	Autoethnography	3	0.4
	Case study	75	10.2
	Commentary	40	5.4
	Descriptive	27	3.7
	Discourse analysis	3	0.4
	Ecological approach	1	0.1
	Impact paper	4	0.5
	Opinion/Perspective	41	5.6
	Practice report	7	0.9
	Program evaluation	38	5.1
	Reflection	26	3.5
	Research study	242	32.8
	Review	101	13.7
	Short communication	10	1.4
	Survey	104	14.1
	Technical report	3	0.4
	Theoretical	4	0.5
Type of study (447)	Mixed	143	32.0
	Qualitative	128	28.6
	Quantitative	176	39.4
Participant type (625)	Academic & Students	134	21.4
	Academic/Leadership/Professional	154	24.6
	Community	3	0.5
	Student	334	53.4
Discipline (300)	All	23	7.7
	Health	108	36.0
	Humanities	47	15.7
	Other	26	8.7
	STEM	96	32.0

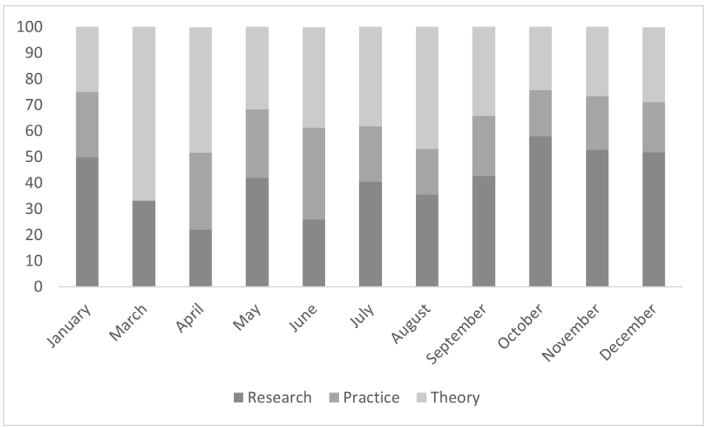

Figure 4. Distribution of publication type across the year.

during COVID-19 was conducted. Further, it is a resource for academic administrators and leaders to learn from the successes and lessons from other institutions, and to enrich their students' learning experiences and quality of life. This database also provides an opportunity for scholars to undertake future research, and we encourage scholars draw upon our systematic efforts in their own research; an appropriate citation to the database is included below.

The CHELD is the first of its kind in the higher education literature, and curates the existing literature, in the context of COVID-19, for higher education practitioners and researchers. Promotion of this resource will be important in supporting COVID-19 scholarship of learning and teaching. We also hope that this database will provide access to new insights into learning and teaching as we collectively learn

from the successes and failures in the higher education sector during the COVID-19 pandemic.

CHELD v2 citation:

Butler-Henderson, K., Tan, S., Lalani, K., Karakka Mandapam, S., Kemp, T., Rudolph, J., Crawford, J. (2021). COVID-19 in Higher Education Literature Database (CHELD). Version 2. Institute of Research Innovation. DOI: https://doi.org/10.37074/jalt.2021.4.1.22d

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