

## POST-COVID-19 PANDEMIC ONLINE EDUCATION IN LATIN AMERICA: A SYSTEMATIC REVIEW OF LITERATURE

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### Abstract

The COVID-19 pandemic has forced higher education institutions to implement virtual education activities without being prepared for it, which has represented a challenge for the traditional educational model. This has been exacerbated in higher education institutions in Latin America, as they do not have the adequate resources and infrastructure for this purpose. The objective of the study was to identify trends in research on online education in Latin America in the wake of the COVID-19 pandemic. To achieve the research objective, a systematic literature review was carried out. Documents published in the Scopus database between 2008-2023 were analyzed using the Biblioshiny and VOSviewer software. Forty-seven documents have been found, of which 40 were published in the period 2019-2023. The keywords have been analyzed according to their co-occurrence. Three hundred and seventy-six were found and forty-seven have been selected with a minimum of two co-occurrences. The documents have been associated into four clusters, which have been analyzed. The results have pointed out the impact on university education during and after the pandemic in Latin America. Online education has continued after the pandemic, which has allowed new forms of learning to be exploited. Distance learning has made it possible to access higher education to sectors of the population that traditionally could not join it, due to the geographical and economic characteristics of Latin American countries. Challenges are noted in the creation of infrastructures and processes that allow this teaching method to be promoted.

**Keywords:** *Online education, virtual education, e-learning, COVID-19, Latin America.*

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### 1. Introduction

Universities experienced an unprecedented shift from traditional face-to-face teaching and learning to online learning in response to the COVID-19 lockdown (Marinoni et al., 2020). Particularly, many universities in Latin America are experiencing a serious lack of resources that has plunged them into a deep financial crisis and the COVID-19 pandemic has increased this calamity (Quispe-Prieto et al., 2021). More than 160 million students from Latin America (LATAM) and the Caribbean were affected (Bárcena & Uribe, 2020). The authorities of educational institutions initiated online learning strategies through virtual online learning environments, which has been called “emergency remote teaching” (Barbour et al., 2020). Although many higher education institutions already had virtual learning environments, which were used for face-to-face teaching, the challenge for teachers was to provide adequate teaching materials through e-learning tools that kept students highly engaged (Tadesse & Muluye, 2020). On the other hand, students also faced obstacles of the digital divide to access technology and relevant digital tools, considerably affecting learning. Access to the Internet and optimal electronic devices are just some of the challenges they faced (Litchfield et al., 2021).

### 2. Design

To achieve the stated research objective, a Systematic Literature Review (RSL) was carried out, an adaptation of that proposed by Tranfield (2003).

### 3. Objectives

The objective of the study was to identify trends in research on online education in LATAM in the wake of the COVID-19 pandemic.

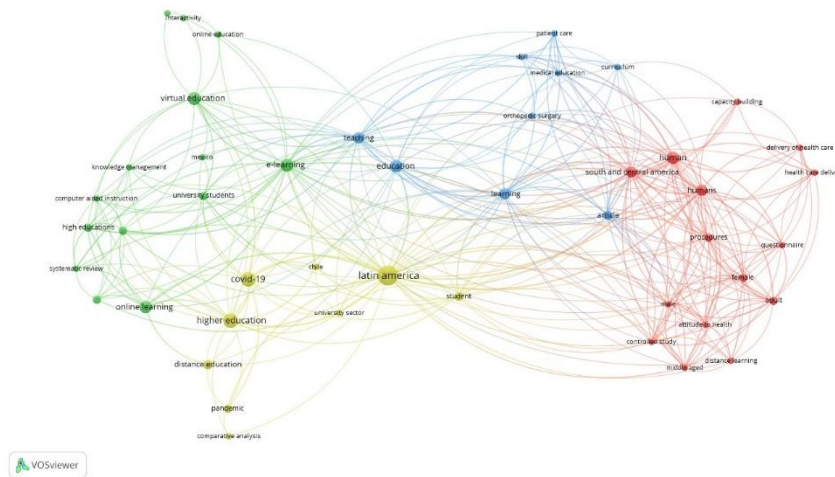
## 4. Methods

The period 2008-2023 was analyzed. The search was carried out in the Elsevier Scopus database. The review was limited to articles, review articles and book chapters already published. 47 documents were found that met the stated requirements. The Biblioshiny and VosViewer programs were used to analyze the collected documents. The search term was: (( TITLE-ABS-KEY ("online learning") OR TITLE-ABS-KEY (elearning) OR TITLE-ABS-KEY ("virtual education") AND TITLE-ABS-KEY ("latin america") OR TITLE-ABS-KEY (latam)) AND ( LIMIT-TO ( DOCTYPE, "ar") OR LIMIT-TO ( DOCTYPE, "re") OR LIMIT-TO ( DOCTYPE, "ch")) AND ( LIMIT -TO (PUBSTAGE, "end") ).

## 5. Results

Forty-seven documents have been found, of which 40 were published in the period 2019-2023. When analyzing the 20 keywords most used by the authors, "Covid-19" stands out. This indicates the transformation that the pandemic had in online education, forcing teaching to be transformed due to the restrictions generated. The keyword "digital competences" emerges as a variable to consider. The co-occurrence analysis of the author's keywords was performed with at least two co-occurrences (Figure 1). A total of 47 keywords resulted from the analysis, which were grouped into 4 clusters.

Figure 1. Formation of keywords in clusters.



## 6. Discussion

In the first cluster, keywords focused on people's health are identified, such as "attitude to health", "delivery of health care", "health care delivery"; as well as "human", "humans", "female" and "male". The online education implemented during the pandemic had the main purpose of caring for people, leaving education itself as a secondary objective (Hughes et al., 2019; al., 2019; Reyna et al., 2022). The second cluster grouped together the keywords referring to online education, such as "e-learning", "online education", "online learning" and "virtual education". These words were in conjunction with those focused on university education, "high educations", "higher education institution" and "university students". Research on online education has focused mainly on university education, due to the virtual modalities that higher education institutions have carried out to incorporate students who cannot access traditional education (Almaraz-Rivera, 2023; Stanley & Rocio Montero Fortunato, 2022). The medical area uses the benefits of online education, seeking constant updating (Idris et al., 2021; Salas-Pilco et al., 2022). The last grouping shows the comparative analyses that have been carried out because of the pandemic in online education (Soria-Barreto et al., 2021).

## 7. Conclusions

The objective of the research was to identify trends in research on online education in LATAM in the wake of the COVID-19 pandemic. An RSL was carried out. The results showed the impact on university education during and after the pandemic. The pandemic forced it to be implemented in all universities and educational programs. Online higher education has continued after the pandemic, allowing other forms of learning to be exploited. This is mainly found in regions that do not have the physical infrastructure for in-person education, as well as where geographical and demographic conditions are adverse.

## Acknowledgment

Thanks to CONAHCYT and the ICTI of the state of Michoacán for their support.

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