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# META-ANALYSIS ON THE ACADEMIC MANAGEMENT OF HIGHER EDUCATION INSTITUTIONS THROUGH THE USE OF VIRTUAL PLATFORMS

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**Medina Reyes Adalid**  
Technological University of Honduras  
<https://orcid.org/0000-0002-2015-3819>  
[adalid.medina@uth.hn](mailto:adalid.medina@uth.hn)

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**Abstract:** The following meta-analysis provides a quantitative synthesis of accumulated studies on How was higher education administration achieved through virtual platforms? The study presented aimed to analyze studies and compare their similarities and differences in relation to higher education administration through platforms. Meta-analysis was used as the methodology, which allowed studies to be selected for analysis using inclusion and exclusion criteria, enabling the selection of repositories and types of documents for analysis. Among the results, 20 studies were selected, of which 3 were excluded for not meeting the requirements, and in the remaining 17 studies, it was found that the variables of higher education and online classes are the ones that most coincide in the research. The documents included were found in databases such as Google Scholar, Scielo, and Redalyc. It is concluded that continuous improvement by higher education institutions in terms of platform administration is essential, since the use of virtual tools is not only for emerging education but is also a key component of formal education that is here to stay and must therefore be improved to provide quality online education.

**Keywords:** Meta-analysis, Virtual education, Information technologies, Knowledge, Higher education  
Higher education.

**Abstract:** This meta-analysis provides a quantitative synthesis of accumulated studies on how higher education administration was achieved through virtual platforms. The aim of this study was to analyze studies and compare their similarities and differences regarding the administration of higher education through platforms. The meta-analysis methodology was used to select studies for analysis based on inclusion and exclusion criteria, allowing for the selection of repositories and types of documents for examination. Among the results, 20 studies were initially selected, of which 3 were excluded for not meeting requirements. In the remaining 17 studies, higher education and online classes were the most common variables across research. The documents included were found in databases such as Google Scholar, Scielo, and Redalyc. It is concluded that continuous improvement by higher education institutions in platform management is essential, as the use of virtual tools is not only for emergency education but is rather a key component of formal education that is here to stay. Therefore, it must be enhanced to provide high-quality online education.

**Keywords:** Meta-analysis, Virtual Education, Information Technologies, Knowledge, Higher Education.

## INTRODUCTION

The implementation of technological tools in higher education has become one of the areas of greatest interest in the educational field and has taken on greater relevance after the COVID-19 pandemic, which has led to numerous studies on how to manage online classes. Having

It should be noted that changes in education have been radical, and educational institutions have had to adapt to new methodologies in order to continue teaching. (Bas Vilizzio et al., 2021)

Over the years, technology has transformed various processes, and in the field of education, software, platforms, and tools have been created that allow online classes to run smoothly and learning processes to be more interactive. However, educational institutions had only a few days to switch their educational programs from face-to-face to virtual mode. (Sunkel & Trucco, 2012) The process of planning, designing, and developing an online program takes a long time. In addition, educational actors must manage platforms and tools that some are unfamiliar with, and educational quality is affected if technology is not properly implemented in education. (Carriazo Díaz et al., 2020)

The digital age is a fundamental part of reality in all scenarios, and the functionality provided by technological tools in the educational context is evident. However, educational institutions must fulfill their role in the use of technological resources to support learning processes. (Granados Maguiño et al., 2020) In this sense, this meta-analysis focuses on jointly analyzing the administration of education through virtual platforms, with the aim of unifying the results of the studies analyzed and determining how this process was achieved.

A systematic review brings together available studies that address a specific topic and design, evaluating and analyzing their results. During this process, the quality of the studies is examined, and a statistical analysis based on that quality is performed. Meta-analysis is a valid, objective, and scientific method for analyzing and combining various results. (Marín, 2022) Generally, to ensure greater reliability, meta-analysis focuses on randomized controlled trials (RCTs), as they represent a high level of evidence. (Letelier et al., 2015)

Its relevance lies in facilitating the collection of accurate, high-quality data from the enormous volume of information available. However, a lack of understanding of systematic reviews and meta-analyses can lead to erroneous results in the analysis and review processes. (Letelier et al., 2015) If readers uncritically accept the results of the numerous meta-analyses that are published, incorrect data may be generated. Therefore, in this review, we seek to clearly explain the content and methods used in systematic reviews and meta-analyses so that both future authors and readers can easily understand them.

## **DEVELOPMENT**

The objective of this research is to analyze the scientific production of articles on senior management through virtual platforms, performing a systematic and quantitative classification based on nine research variables:

- 1) Year of publication

- 2) Source of the files
- 3) Authors
- 4) Institutions
- 5) Countries
- 6) Document type
- 7) Areas
- 8) Publication language
- 9) Most cited references

To this end, a meta-analysis study was conducted in accordance with the quality indicators established by the PRISMA statement for works of this nature. (Urrútia & Bonfill, 2010)

Each of these disciplines uses methodologies adapted to its field of study. There is no great divergence between the meta-analysis methodology applied in the different sciences, but there are cases in which some points are excluded and others in which particularities are added that are required according to the research problem. It is very important to define an algorithm that allows researchers, especially in the field of engineering, to follow the critical points for application to problem solving. (Tinto, 2009)

As a starting point for the meta-analysis, the documents to be collected and the repository from which the data were obtained were determined. For the most part, journal articles were chosen, and Table 1 shows the selected repositories with their respective web addresses.

**Table 1.** Selection of repositories for information retrieval.

Type of document	Repository	Electronic address
Journal articles	Google Scholar	<a href="http://www.spentamexico.org/v15-n1/A1.15(1)1-15.pdf">http://www.spentamexico.org/v15-n1/A1.15(1)1-15.pdf</a>
	Google Scholar	<a href="https://www.ciencialatina.org/index.php/cienciala/article/view/1644">https://www.ciencialatina.org/index.php/cienciala/article/view/1644</a>
	Google Scholar	<a href="http://revistaelectronica-ipn.org/ResourcesFiles/Contenido/23/HUMANIDADES_23_000872.pdf">http://revistaelectronica-ipn.org/ResourcesFiles/Contenido/23/HUMANIDADES_23_000872.pdf</a>
	Google Scholar	<a href="https://dialnet.unirioja.es/servlet/articulo?codigo=7828567">https://dialnet.unirioja.es/servlet/articulo?codigo=7828567</a>
	Google Scholar	<a href="https://revista.redipe.org/index.php/1/article/view/1491">https://revista.redipe.org/index.php/1/article/view/1491</a>
	Google Scholar	<a href="https://ultimadecada.uchile.cl/index.php/EDA/article/view/58234">https://ultimadecada.uchile.cl/index.php/EDA/article/view/58234</a>

	Google Scholar	<a href="https://www.revistapublicando.org/revista/index.php/crv/article/view/2159">https://www.revistapublicando.org/revista/index.php/crv/article/view/2159</a>
	Google Scholar	<a href="https://www.ciencialatina.org/index.php/cienciala/article/view/664">https://www.ciencialatina.org/index.php/cienciala/article/view/664</a>
	Google Scholar	<a href="https://www.dominiodelasciencias.com/ojs/index.php/es/article/view/1428">https://www.dominiodelasciencias.com/ojs/index.php/es/article/view/1428</a>
	Google Scholar	<a href="https://revistadigital.uce.edu.ec/index.php/criticayderecho/article/view/3188">https://revistadigital.uce.edu.ec/index.php/criticayderecho/article/view/3188</a>
	Google Scholar	<a href="http://www.1.revistaespacios.com/a20v41n35/a20v41n35p04.pdf">http://www.1.revistaespacios.com/a20v41n35/a20v41n35p04.pdf</a>
Report	Google Scholar	<a href="https://repositorio.cepal.org/handle/11362/45904">https://repositorio.cepal.org/handle/11362/45904</a>
	Scielo	<a href="https://www.scielo.br/j/se/a/4YSmXPhS8bHNHSp4pGhQ4Tk/">https://www.scielo.br/j/se/a/4YSmXPhS8bHNHSp4pGhQ4Tk/</a>
	Scielo	<a href="http://scielo.sld.cu/scielo.php?script=sci_arttext&amp;pid=S1990-86442021000500086&amp;lng=es&amp;tlng=es">http://scielo.sld.cu/scielo.php?script=sci_arttext&amp;pid=S1990-86442021000500086&amp;lng=es&amp;tlng=es</a>
	Redalyc	<a href="https://www.redalyc.org/articulo.oa?id=12268654012">https://www.redalyc.org/articulo.oa?id=12268654012</a>
	Redalyc	<a href="https://www.redalyc.org/jatsRepo/270/27063237017/html/index.html">https://www.redalyc.org/jatsRepo/270/27063237017/html/index.html</a>
	UNAN-Managua	<a href="https://repositorio.unan.edu.ni/17070/2/admin-10-articulo-117-124-a.pdf">https://repositorio.unan.edu.ni/17070/2/admin-10-articulo-117-124-a.pdf</a>
	Dialnet	<a href="#">COVID-19 and higher education: From immediate effects to the day after. Analysis of impacts, policy responses, and recommendations</a>
<i>Note: Author's creation</i>		

The selection criteria for journals were as follows: the journals had to be indexed in databases. In addition, the inclusion criteria for selecting journal articles were:

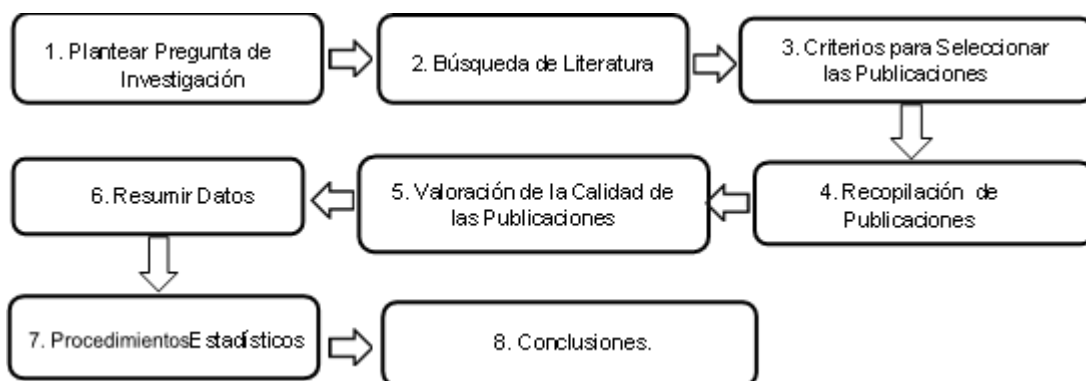
1. The study had the basic elements of scientific research (journal, title and authors, abstract, keywords, introduction, methodology, results, discussion, conclusions, and references).
2. Whether diagrams, graphs, or other elements were used to facilitate comprehension of the study.
3. If it contains at least fifteen bibliographic references to support it.

Before beginning the search process, a literature review was conducted on virtual platforms to establish the keywords that would form the search matrix. From that step, the following terms were included for the article: online classes, digital tools, and private universities. Based on documents published in the period 2020-2022 in different repositories. Google Scholar, Dialnet, and Redalyc are the databases chosen for the search and selection of articles. A total of 20 studies were reviewed in depth for analysis, of which 17 met the inclusion criteria.

The following describes the application of the meta-analysis methodology, specifically relating the factors and evaluation criteria in the administration of higher education through virtual platforms. The following points cite the eight stages that constitute this methodology (Colín, 2007):

1. Formulate the research question.
2. Literature search.
3. Criteria for Selecting Publications.
4. Compilation of Publications.
5. Assess the quality of publications.
6. Summarizing Data.
7. Statistical Procedures.
8. Conclusions.

**Figure 1.** Meta-analysis methodology (Colín, 2007).



**Table 2.** Search procedure.

<b>Database</b>	Repositories: Latindex, Scielo, Dialnet, Google Scholar, Redalyc
<b>Search period</b>	Publications between 2020 and 2022 were considered.
<b>Combinations</b>	"Higher education administration" and "virtual platforms" "Higher education" and "Remote education" "Access to education" and "information technologies" "Remote education" and "university teachers" "Educational management" and "virtual education" "Digital transformation" and "online classes" "Educational challenges" and "migration to digital platforms"

<b>Appearance of thesauri</b>	Title, abstract, keywords, or full text.
<b>File type</b>	All possible references indexed in the database were considered (periodicals, books, conference proceedings, theses, articles, review articles, among others).
<b>Areas of publication</b>	All areas of publication were considered.
<i>Note: Author creation 2024</i>	

**Table 3.** Inclusion criteria.

<b>Variable</b>	<b>Inclusion criterion</b>
<b>Year of publication</b>	The years 2020 to 2022 are considered
<b>Source of files</b>	Selected based on three or more research studies converging on the same resource (magazine, book, journal, among others).
<b>Authors with the most scientific output</b>	They must have at least three references on the subject.
<b>Institutions</b>	You must have at least three references on the subject.
<b>Countries</b>	At least three references on the subject must be provided.
<b>Type of document</b>	At least three references on the subject must be available.
<b>Area of publication</b>	At least three references on the subject must be available.
<i>Note: Author creation 2024</i>	

### Criteria for Selecting Publications

Inclusion and exclusion criteria are the basis on which the meta-analysis researcher decides whether or not to select studies to be included in their research (e.g., country of origin, language, date of publication). These criteria must be specified in the protocol, in accordance with the objectives proposed before beginning the search for possible studies to combine, which is called sensitivity analysis. (García Castellanos, 2016)

Not all the studies collected can be included in the meta-analysis; the requirements for a study to be included must be established. (Colín, 2007)

Once the original studies have been collected and selected (according to the inclusion and exclusion criteria), the descriptive information is reviewed and summarized. There is no universally valid model for coding the information from the studies to be combined. Once the data related to the research topic have been identified, the sample size of data to be considered for statistical analysis is determined.

descriptive analysis of the factors involved in the administration of higher education through virtual platforms.

The main variables that should be extracted from the original studies when conducting a meta-analysis are those mentioned below. (Valles, 2008)

- Identification of the study: authors and country.
- Date of publication of the study
- Language
- Problem studied or hypothesis tested
- Country of publication
- Assessment of the quality or validity of the studies

Likewise, the researcher defines the search and inclusion criteria for the studies; in this particular case, the following is considered:

- a) Published between 2020 and 2022
- b) Publications written in English or Spanish
- c) Peer-reviewed articles
- d) Focus on any field of higher education
- e) Articles mentioning higher education and digital or virtual platforms.

This stage of information gathering will influence the conclusions because the criteria established in the questionnaire ensure a rigorous selection of the studies evaluated. Each question allows us to identify both the strengths and limitations of the studies in relation to the administration of higher education through virtual platforms. This provides a solid and structured basis that will guide the final interpretation, allowing us not only to validate the relevance of the selected studies but also to exclude those that do not meet the minimum standards of reliability, methodological clarity, or thematic relevance.

**Table 4.** Data collection log.

No.	Autores	¿Que hicieron?	¿Cómo lo hicieron?	¿A qué resultados llegaron?	Aporte personal	Referencia	Portal de Investigación	Fuente
1	Abreu, José	La educación en línea como respuesta a la crisis	Análisis de comentarios sobre el tema de la línea de investigación y respuestas en línea.	Las actividades asincrónicas son más razonables que las sincrónicas. Las acreditaciones deben de cambiar para la modalidad virtual.	La pandemia descubrió que a las clases en línea les falta mucho sobre experiencia en enseñanza virtual.	Existe gran diferencia entre las clases que fueron diseñadas para ser digitales bajo sus normas que las que dictan hoy por la pandemia.	Abreu, J. L. (2020). Tiempos de Coronavirus: La educación en línea como respuesta a la crisis.	Google Académico
2	CEPAL UNESCO	La educación en tiempos de la pandemia de COVID-1	Recolección de información en 33 países de América latina y el caribe por la CEPAL en el 2020.	Reto para los sistemas educativos y lo prioritario es la vida comunitaria.	La equidad en el desarrollo de las plataformas digitales y en la adquisición de estas para docentes, estudiantes e instituciones.	Replantear el propósito de la educación. El papel de la educación para el sostenimiento de la vida	CEPAL-UNESCO. (2020). La educación en tiempos de la pandemia de COVID-19.	Repositorio CEPAL. Google académico
3	Santiago Tejedor Laura Cervi Fernanda Tusa Alberto Parola	Los docentes universitarios frente al cambio a la educación virtual impuesta por el coronavirus	Estudio comparativo en 3 países, con análisis de la reflexión de los docentes sobre la enseñanza virtual universitaria. Estudio descriptivo, exploratorio y explicativo.	Los docentes en su mayoría valoran negativamente el paso a la virtualidad por lo recurrente en el implemento del trabajo y la demanda de competencias digitales básicas.	Dependiendo de las carreras universitarias, se necesita más reflexión crítica sobre algunos aspectos, que otro tipo de carreras a nivel universitario.	Los docentes reconocen que es necesaria la promoción del pensamiento crítico y reflexivo vinculado a la gestión estratégica de las Tics.	Tejedor, S., Cervi, L., Tusa, F., & Parola, A. (2021). Los docentes universitarios frente al cambio a la educación virtual impuesta por el coronavirus. <i>Sociedad e Estado</i> , 36, 915-943.	Scielo

**Table 5.** Contribution of articles by database.

Source	Type	Studies Selected	Total
Database	Dialnet	1	20
	Google Scholar	13	
	Redalyc	2	
	Repository ECLAC.	1	
	Scielo	2	
	UNAN-Managua	1	

*Note: Author's creation*

### Assessment of Publication Quality

The meta-analysis study recommends using all available data on a topic, without exception. This principle of exhaustive inclusion, without considering the quality of the combined studies, is the main criticism of the method. However, there is the alternative of paying greater attention to the methodological characteristics of the different studies and giving more weight to the best ones. The quality indices obtained can be used as inclusion criteria (first defining a minimum score

required) or to weight each study in the overall result (giving each one a weight proportional to its quality).

The evaluation was carried out considering thirteen key aspects, each scored from 1 to 4 according to the criteria mentioned previously in Table 6, allowing for a maximum score of 52 points (13 x 4). For a study to be accepted, it had to achieve at least 39 points, representing a score of 75%. It is important to note that three studies were excluded from the final evaluation because their score was below 39 points, which could affect the representativeness of the results presented in Table 7 (Likert, 1932).

### **Literature Inclusion Criteria for this Research**

Based on (Colín, 2007), the evaluation questions for each article were listed below:

1. Does the study come from a reliable source of information?
2. Does the study contain the basic elements of scientific research necessary for a sound evaluation?
3. Does the article contain at least fifteen bibliographic references to support it?
4. Does the study clearly indicate the type of study it is?
5. Is the article written in an understandable way?
6. Does the study use tables or graphs that allow for a better understanding of the study?
7. Does the study focus on the administration of higher education through virtual platforms?
8. Does the study support the theory related to the administration of higher education through virtual platforms?
9. Does the study provide characteristics or criteria that determine the management of higher education through virtual platforms?
10. Does the study provide information that helps to increase knowledge and contribute something new about the administration of higher education through virtual platforms?
11. Does the study have quantitative results?
12. Does the study provide qualitative results (the author's own perceptions)?
13. Is the study sufficiently valid for the results and/or theory presented to be generalizable?

### **Article Evaluation Criteria**

Based on (Colín, 2007), the evaluation criteria for each question were established, which are listed below:

**Table 6.** Example of a format for evaluating publications.

		<b>Value</b>	<b>Comment</b>
<b>Question</b>	1. Does the study come from a reliable source of information?		
<b>Evaluation criteria</b>	- Universities - Organizations - Articles with ISBN, ISSN, DOI - Virtual repositories - Science Direct, among others	4	If it meets at least one of the criteria
<b>Question</b>	2. Does the study contain the basic elements of scientific research necessary for a proper evaluation?		
<b>Criterion evaluation</b>	- Does it include the title, authors, and abstract? - Does it include an introduction, methodology, and results - Includes discussion, conclusions, and references	1 2 4	
<b>Question</b>	3. Does the article contain at least fifteen bibliographic references to support it?		
<b>Criterion evaluation</b>	- 1-5 references - 6 - 10 references - 11 - 14 references - 15 references or more	1 2 3 4	
<b>Question</b>	4. Does the study clearly show the type of study it is?		
<b>Criterion evaluation</b>	- Yes - No	4 1	
<b>Question</b>	5. Is the wording of the article understandable?		
<b>Criterion Evaluation</b>	- Yes - No	4 1	
<b>Question</b>	6. Does the study use tables or graphs that allow for a greater understanding of the study?		
<b>Criterion evaluation</b>	- Tables and graphs - Graphs - Tables - None of the above	4 3 2 1	

## RESULTS ANALYSIS AND DISCUSSION

In this meta-analysis, a total of 20 articles were evaluated according to 13 key questions related to the administration of higher education through virtual platforms.

**Table 7.** Article registration and rating table.

N.	Preguntas													Puntaje Total	Promedio	Calificación	Decisión	Categoría
	1	2	3	4	5	6	7	8	9	10	11	12	13					
1	4	4	3	4	4	1	4	4	4	3	1	4	3	43	3	83%	SI	Incluir
2	4	2	3	4	4	4	4	1	2	3	4	4	1	40	3	77%	SI	Incluir
3	4	4	4	4	4	4	4	4	4	4	4	3	4	51	4	98%	SI	Incluir
4	4	2	3	4	4	1	3	3	4	3	1	2	3	37	3	71%	NO	Excluir
5	4	4	4	4	4	1	4	4	4	4	1	4	4	46	4	88%	SI	Incluir
6	4	4	4	4	4	4	4	4	4	4	4	2	4	50	4	96%	SI	Incluir
7	4	4	3	4	4	1	4	4	4	3	1	3	3	42	3	80%	SI	Incluir
8	4	3	2	3	4	4	4	2	4	4	4	1	3	42	3	81%	SI	Incluir
9	4	1	1	4	4	1	2	1	2	2	1	2	1	26	2	50%	NO	Excluir
10	4	1	4	4	4	1	1	1	1	3	1	2	1	28	2	54%	NO	Excluir
11	4	4	4	4	4	4	4	4	4	4	4	4	4	52	4	100%	SI	Incluir
12	4	4	4	4	4	4	4	4	4	4	4	3	4	51	4	98%	SI	Incluir
13	4	4	4	4	4	4	4	4	4	4	4	2	4	50	4	96%	SI	Incluir
14	4	4	2	4	4	4	4	4	4	4	4	2	4	48	4	92%	SI	Incluir
15	4	4	3	4	4	4	4	4	4	4	4	2	4	49	4	94%	SI	Incluir
16	4	4	4	4	4	1	4	4	4	4	3	3	4	47	4	90%	SI	Incluir
17	4	4	4	4	4	4	4	4	4	4	4	2	4	50	4	96%	SI	Incluir
18	4	4	4	4	4	2	4	4	4	4	4	2	4	48	4	92%	SI	Incluir
19	4	3	4	4	4	1	4	2	2	4	1	3	3	39	3	75%	SI	Incluir
20	4	4	4	4	4	4	4	4	4	4	2	2	4	48	4	92%	SI	Incluir

*Nota: Elaboración del autor*

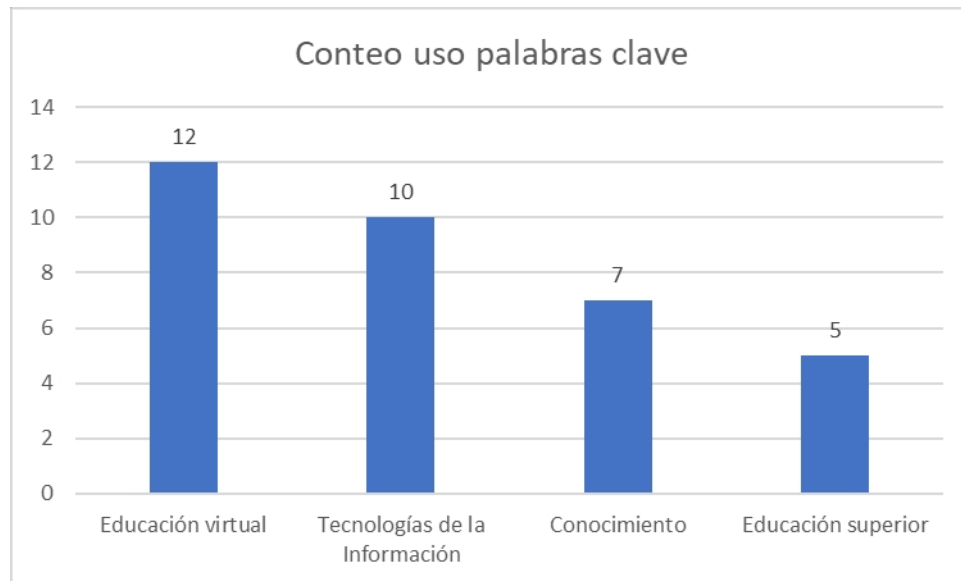
Of the 17 articles included, most show a high level of compliance with the established criteria. A total average score of 3.83 was observed, indicating strong alignment with research quality expectations. The article with the highest score (52) obtained an average of 4, indicating an excellent response to all the criteria evaluated.

Questions 1 (reliable sources) and 5 (understandable writing) received the highest average score of 4, suggesting that most studies are based on reliable sources and are well written. On the other hand, question 11 (quantitative results) and question 12 (qualitative results) received the lowest scores, with averages of 2.8 and 2.6, respectively. This indicates that many studies did not present robust quantitative data or meaningful qualitative insights, which could be an area for improvement in future research.

The excluded articles had total scores of 37, 26, and 28, indicating a low level of compliance with the criteria. These studies lacked the depth and clarity necessary to

contribute to the body of knowledge on the administration of higher education through virtual platforms.

**Graph 1.** Use of keywords in the publications analyzed.



In the analysis of keywords, Virtual Education was the most frequently mentioned, with 12 mentions, highlighting its centrality and relevance in the context of higher education. Next, Information Technology was cited 10 times, indicating the importance of technological tools in facilitating online learning. The word Knowledge was mentioned 7 times, suggesting a focus on how knowledge is constructed and shared in virtual environments, while Higher education was mentioned 5 times, implying that, although the main focus is on virtual education, the impact of these methodologies on academic institutions is also considered. These findings suggest a leaning toward educational innovation and may be useful for future research in the field of higher education and its adaptation to digital environments.

## Discussion

The articles analyzed and included in this analysis agree that the use of digital platforms in higher education has been a success. Studies indicate that these tools had a greater impact on institutions that used them as a complement to traditional face-to-face education. This hybrid approach not only allowed for greater flexibility in teaching, but also facilitated significant progress in the preparation and training of teachers in the use of information and communication technologies (Morales et al., 2020) (Tejedor, 2021).

The strategies used in the implementation of virtual education, although applied over a short period, highlighted the importance of adequate planning and training. Most of the publications analyzed reiterate that this transition was carried out through a process of trial and error. Within an average period of three months, many institutions managed to stabilize their teaching methods and successfully continue the teaching-learning process virtually (Reyes & Gonzalez Torres, 2022). This finding highlights the resilience of educational institutions in the face of unexpected circumstances, such as the COVID-19 pandemic, which forced a rapid shift to online teaching modalities.

With regard to knowledge acquired through remote or virtual teaching, it has been observed that this approach not only focuses on content delivery but also fosters critical skills such as self-management and adaptability among students. Studies indicate that virtual teaching allows students to access a wide range of resources and diverse learning methodologies, enriching their educational experience. In addition, online interaction, although different from face-to-face interaction, has proven to be effective in maintaining student motivation and engagement.

In the context of private universities, the incorporation of information and communication technologies (ICT) has been particularly notable. These institutions, often with more resources available, have been able to invest in digital platforms and teacher training. However, they also face challenges, such as the need to ensure equitable access to technology for all students. Some studies have pointed out that, despite the advantages, significant gaps in access to online education persist, which can exacerbate existing educational inequalities.

Meta-analysis, which originated in the social sciences, particularly in education, is a powerful tool for synthesizing findings from multiple studies and providing a clearer picture of trends and outcomes in this field (Botella, 2017). This methodology is relevant for collaboration in answering the systematic review research question, as it allows for the identification of patterns and discrepancies in the existing literature, providing a solid basis for future research. Thus, the results obtained not only contribute to the existing body of knowledge but also offer practical recommendations for the implementation of effective strategies in virtual higher education.

## **CONCLUSIONS**

The analysis carried out on the administration of higher education through virtual platforms has highlighted the speed with which the transition from face-to-face to virtual teaching took place, a transformation largely driven by environmental health circumstances. This change was not only necessary to ensure educational continuity, but also marked a milestone in the evolution of the education system, forcing institutions to adapt quickly and effectively to a digital environment.

The increase in the use of virtual platforms has proven to be an efficient and safe response, allowing universities not only to survive the crisis but also to thrive in a changing context. The articles analyzed agree that this new form of education has facilitated accessibility and expanded the scope of learning, giving students the opportunity to participate in courses and programs that were not previously available. In addition, it is noted that the use of information technologies has allowed for the integration of various educational resources, which has enriched the learning experience by offering interactive and personalized materials.

It is also important to note that, although the implementation of virtual education has presented various challenges, such as the need for teacher training and unequal access to technology, digital teaching has shown great potential to transform higher education in the near future. The experience gained during this critical period can serve as a basis for the development of hybrid educational models, where face-to-face and virtual education complement each other to offer a more comprehensive education.

The integration of virtual platforms into higher education has not only been a response to an immediate crisis, but has also opened the door to a new educational paradigm. As we move forward, it is crucial to continue researching and adapting our pedagogical strategies to maximize the benefits of this transformation, ensuring that higher education continues to evolve in an increasingly digitized and competitive world.

## **FUTURE WORK**

Thank you Based on the findings of this meta-analysis, several areas have been identified that could be the subject of future research to further explore how virtual platforms impact the administration of higher education. Some of the most notable are:

1. An analysis of administrative efficiency in key digital processes, such as student enrollment, academic performance tracking, and service automation, taking into account indicators of effectiveness and user satisfaction.

2. Research on the use of virtual platforms as support tools in academic decision-making, especially through real-time data analysis on student dropout rates, teaching performance, and curriculum efficiency.

3. An evaluation of successful academic management models in universities operating in virtual environments, with a focus on their structural integration, institutional governance, and technological adaptability.

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