# Revisiones de literatura aplicadas a la Informática Educativa

PhD. Jaime Sánchez I. & PhD. ©José Reyes-Rojas



## ABC de la Revisión de Literatura

## ¿Qué es?

- Systematic review is an efficient scientific technique (...) a review can prevent meandering down an already explored path (Mulrow, 1994)
- The <u>systematic</u> review (...) aims to provide a comprehensive, unbiased <u>synthesis</u> of many relevant studies in a single document (Aromataris & Pearson, 2014)
- The main method of synthesis is a systematic literature review (SLR). (...) an SLR is a <u>methodologically rigorous review</u> of research results. (Kitchenham *et αl., 2009*)
- The aim of an SLR is not just to aggregate all existing evidence on a research question; it is also intended to support the development of evidence-based guidelines for practitioners. (Kitchenham et al., 2009)







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Systematic literature reviews in software engineering – A systematic literature review

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## Revisión sistemáticas de literatura (RSL)

- Es una técnica investigativa (sistemática, replicable)
- · Permite identificar brechas en el conocimiento
- Sintetiza altos volúmenes de información
- Responde a preguntas de investigación
- Constituye un aporte para el desarrollo disciplinar



"the systematic review is an efficient scientific technique. Although sometimes arduous and time consuming, a review is usually quicker and less costly than embarking on a new study. Just as important, a review can prevent meandering down an already explored path" (Mulrow, 1994)

¿Cómo realizar una revisión de literatura?





Pregunta de Investigación

# Delimitación del tema

- Pregunta de investigación: Tiene que ser respondida por una revisión de literatura
- · Criterios de inclusión: Delimitan la información que se recoje
- Criterios de exclusión: Primer filtro, aquella información que calza a grandes rasgos con el tema de investigación, pero que no ayuda a responder la pregunta.

#### How Prepared was the World for Emergency Distance Learning in K-12 Education? A Literature Review

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Abstract. The present study answers the question of how prepared the world was in school distance education. The situation of primary and secondary education is deepened around experiences in distance education focused on students, in the period that includes the decade between 2010 and 2019. Designs and modalities of distance education, types of interaction, recurring themes, and impact of reported experiences were analyzed. The results reveal a low preparation in distance school education, compared to the high demand for online education that has arisen since the COVID-19 pandemic. The blended learning design appears as the most used modality, while the type of asynchronous interaction was the most frequent before the pandemic. In addition, differences are recognized in the impacts reported in the analyzed literature, which allows establishing a type of impact that includes distance education as its independent variable, and another that considers it as a more contextual element while studying the relationships between other variables.

**Keywords:** Distance education, K-12, Blended Learning, Online education, COVID-19, Synchronous and asynchronous education.

#### 2.2 Inclusion criteria

- English language: Being a search open to everyone, the English language was used as the common basis for scientific reports.
- Primary and secondary education (K-12): Educational experiences carried out in primary and secondary education, including the final phases of secondary education, were considered as vocational experiences with the condition that they continue to be part of secondary school and not university exclusively.
- Considered the period between the years 2010 and 2019: To better define the borders of the decade, 10 years were considered to count from 2010 for the search for articles, even though they report educational experiences prior to 2010. To avoid confusion or add more filters to the review, only the year of publication will be considered.
- Student-centered experiences: It is a central part of the study to restrict the search to articles that account for the knowledge created from active experiences that have students as protagonists, regardless of whether these actors can relate to others both in the collection and in the analysis of the data of each article.
- Empirical articles: Finally, only scientific articles were considered as baseline criteria that ensure the search for experiences evaluated around their means and their results.

#### 2.3 Exclusion criteria

- Experiences centered on teachers: Articles focused on teachers will be left out of the study, fundamentally due to the student-centered perspective that this study intends.
- Education for adults: By focusing the study on childhood and youth, although there
  may be experiences of adults at primary or secondary educational levels, they will
  be excluded from the sample.
- Preschool education: This educational level was not addressed by the present study due to the complexity of technological insertion in preschool and the differences in coverage worldwide.
- Homeschooling or non-formal education: When discussing the forced change from face-to-face and mass education to distance education, other types of education such as home education or forms of non-formal education are left out.
- Technological applications that do not necessarily cover distance education: There is a large literature that, using concepts typical of the search, does not necessarily address aspects of distance education. Therefore, a distinction was made between articles that described digital uses in school, with those that were situated in an educational design that involved distance education in some of its parts.
- Secondary data: Articles such as reviews or evaluations based on secondary data were excluded, considering the intention of investigating specific educational experiences in primary or secondary education and focused on students.

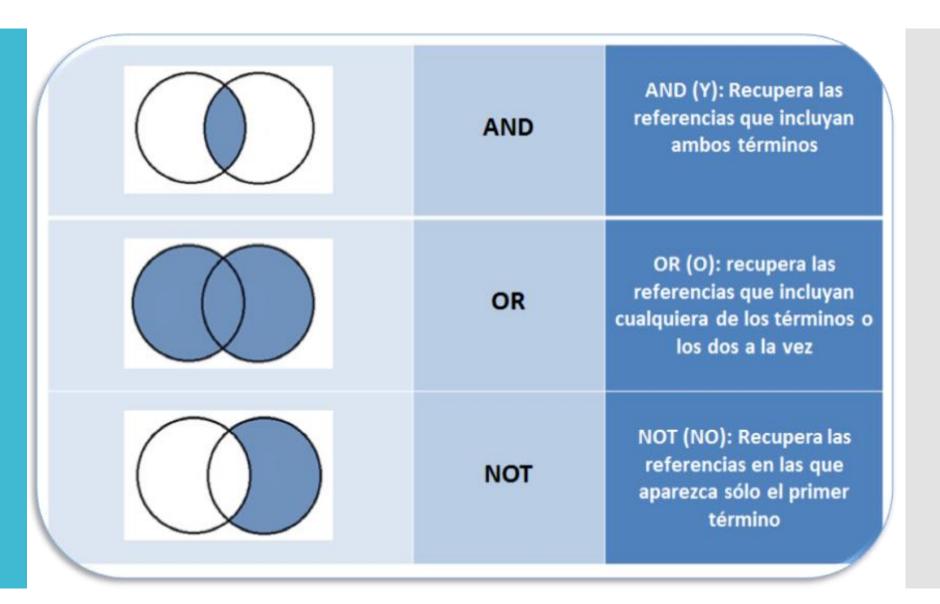
Identificar palabras clave según pregunta de investigación

Usar booleanos, inicialmente "OR", "AND", "NOT"

Seleccionar Bases de Datos para búsqueda según impacto y disciplina (Ej: WOS, Scopus, PubMed, etc.)

## Búsquedas

## Booleanos



# Chapter 19 Chilean Perspectives on Educational Experiences and Innovations in Emergency Contexts



Jaime Sánchez and José Reyes-Rojas

Abstract Emergency remote teaching began suddenly and widely by March 2020 after the World Health Organization declared the coronavirus pandemics Chilean education, as many other countries around the globe, adopted the methodology of remote teaching with little no previous experience and a lack of adequate and pertinent administrator, teacher, student, and parent preparation. This chapter presents, analyzes, and discusses the Chilean higher education experiences and innovations in emergency contexts during the COVID-19 pandemic. Actual and future perspectives are discussed on the basis of education in a country with frequent emergency contexts such as earthquakes, tsunamis, floods, fires and now a pandemic. We

To focus the search, the initial selectivity criterion was that the documents in whole or in part describe experiences or proposals carried out in higher education institutions in Chile. For this, the following search string was constructed: (higher OR superior) AND (educa\* AND covid) AND (Chile\*). The search was carried out in two databases with high academic impact, Web of Science (WOS) and Scopus, at different times during 2021. A total of 28 documents were selected from the 2 databases, of which 6 were repeated and 1 was excluded because, despite being published in the COVID-19 era, the information collection had been carried out 2 years

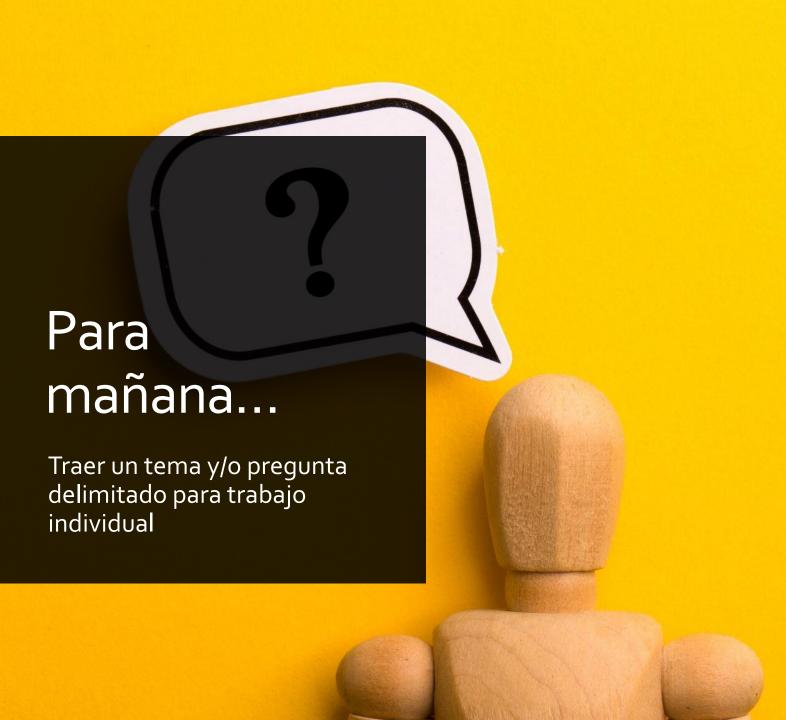
## Trabajo en grupos (pares o tríos)

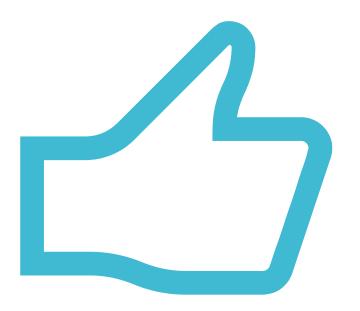
Elección de un tema en común

Delimitación de criterios de inclusión

Desarrollo de búsquedas

Actividad





## Obrigado

# Revisiones de literatura aplicadas a la Informática Educativa

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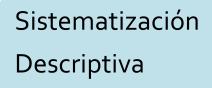




## Recapitulando

- ¿Para qué sirve la Revisión Sistemática de Literatura (RSL)?
- ¿Cómo se realiza?
- ¿Qué problemas y oportunidades les trajo la actividad anterior?

## ¿Cómo sistematizar los datos?



-Se sintetiza en torno a las características de la muestra

#### Sistematización

#### Analítica:

- -Se sintetiza en base a los hallazgos
- -Se reorganiza la información en categorías
- -Interpretación

#### Metodología para el estudio de la enseñanza remota de emergencia en instituciones de educación superior: el caso chileno

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#### RESUMEN

En el marco de la transición rápida y forzada hacia modalidades de educación remota, las instituciones de educación superior sortearon de diferente manera las dificultades y desafíos propuestos por la enseñanza remota de emergencia. El presente estudio analiza el caso de Chile, donde la literatura científica reporta temáticas emergentes como la salud mental, aumento de brechas sociales, retroceso a formas tradicionales de enseñanza y disparidades en el desempeño académico. Por otra parte, se develan redes de producción científica, impacto y métodos empleados desde los estudios analizados. Así, desde la revisión de la experiencia investigativa del estudio de [28], más los resultados aportados por el estudio actual, se proponen nuevas caracterizaciones de la productividad científica y, finalmente, una metodología replicable para el estudio de la enseñanza remota de emergencia en instituciones de educación superior.

#### **Author Keywords**

Enseñanza remota de emergencia; Educación a distancia; covid-19

#### **ACM Classification Keywords**

#### INTRODUCTION

Hay pocos momentos en la historia en la que la humanidad completa debe cambiar radicalmente sus rutinas para subsistir en todas las dimensiones de su existencia. La crisis social y sanitaria desatada por el covid, impactó a todas las áreas de la vida, entre ellas a la educación. Si nos enfocamos en la formación y preparación de los futuros profesionales responsables del funcionamiento de todo un país, es indispensable que los medios para sostener su formación aun en condiciones extremas de aislamiento, sigan funcionando. Para IESALC-UNESCO a partir del Covid-19 la educación superior de todo el mundo ha sufrido de repercusiones en aspectos como la administración y gestión, la enseñanza y el aprendizaje, la investigación y la internacionalización [13] lo que nos permite conocer un estado general y comparado de contracciones en el desempeño regular de la educación superior a nivel global.

Sobre el desempeño de la educación superior en condiciones de adaptación en plena pandemia, existen variados estudios que reportan experiencias de enseñanza remota de emergencia situadas en países específicos. [20] comparan la satisfacción sobre las plataformas online entre estudiantes de

#### **RESULTADOS**

#### Características de la muestra

La revisión desplegada en las dos bases de datos mencionadas incluyó estudios sobre la realidad chilena como también de coberturas más amplias a nivel planetario [1], regional [30, 31, 7] o comparativo entre países [16], dentro de los cuales estaba incluido Chile. A continuación, se expondrán características de la muestra relativas al tipo de documento, impacto, lugares de producción del conocimiento, lugares de publicación, y metodologías y muestras de los mismos.

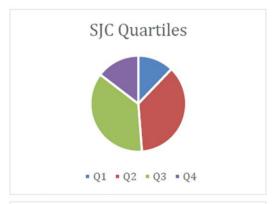
#### Tipo de documento

La muestra seleccionada contempla en su mayoría documentos del tipo artículo científico con reporte y hallazgos basados en estudios empíricos (16). Del mismo modo, aparecen publicados conference papers (3) que también dan cuenta de estudios empíricos [10, 3, 14]. También se incluye una editorial [16] y un artículo científico de propuesta de modelo de educación online sin estudio empírico [6].

#### Impacto (citas y revistas)

Para medir el impacto de las publicaciones en torno a las experiencias educativas en educación superior en Chile se tomó en consideración tanto los niveles de citación de los estudios como las métricas de las revistas en las cuales

Figura 1. Impacto según cuartiles de las revistas





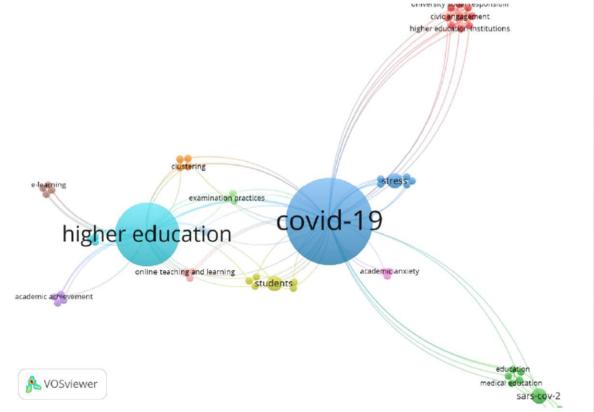


Figura 2. Principales keywords: El tamaño de los círculos revela cantidad de apariciones de cada keyword.

#### How Prepared was the World for Emergency Distance Learning in K-12 Education? A Literature Review

José Reyes-Rojas<sup>1</sup> and Jaime Sánchez<sup>2</sup>

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Characteristics of student-users. This category groups articles that address aspects of students, such as motivation (Pardanjac et al., 2010), attitude towards learning (Chao et al., 2015; Kim et al., 2012; Kirby & Sharpe, 2010), predispositions (de la Varre et al., 2014; Malinovski et al., 2014), preferences (Randler et al., 2014), and tensions towards distance learning (Tochon, 2015).

The papers vary both in the disciplines they address and in their methodological approaches. Thus, while Kirby & Sharpe (2010) seek to characterize the factors of students that affect the possibility of taking a distance course through logistic regression, the work of Tochon (2015) presents a critical autobiography from which he proposes conceptual crossings with theories of power. There are also studies such as those by Randler et al. (2014) who set out to find the relationship between the chronotypical preferences of students and the development of their attitudes towards online distance education.

The documents, in general, highlight the positive attitude of the students towards the innovations and new technologies used in the reported interventions, which could be a precedent that allows contrasting the impact of remote experiences when they are controlled and sporadic, as in the past decade, in contrast to contexts of health emergency where massive and distance digital education has been an obligation, as in the current decade.

Trends and innovation in distance education. The category brings together documents that show innovative uses of technology applied to distance learning, such as interactive videoconferencing (Anastasia-des et al., 2010; Thompson & Nutta, 2015; Xiong et al., 2017a), the use of automatic scaffolding in web browsing (Huertas et al., 2015, 2018), the innovative use of flipped classrooms and blended learning (Burdina et al., 2019; Gariou-Papalexiou et al., 2017), and the application of distance learning for disciplines related to creation and art (Edward et al., 2018; Garcia-Garcia et al., 2017).

The documents, although diverse in their thematic approach, share creative and advanced proposals in the panorama of the past decade regarding digital distance learning.

Thus, the work of Yiong et al. (2017) proposes a classroom format where teachers and

# Aumentar y disminuir

FILTROS

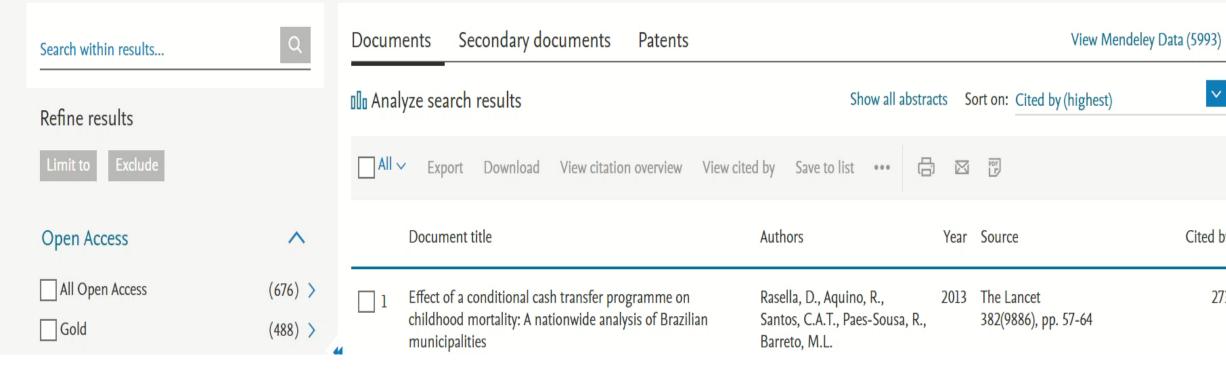
Según criterios de inclusión y exclusión

SNOWBALLS

## 1,709 document results

TITLE-ABS-KEY ((education AND technology) AND (brazil))

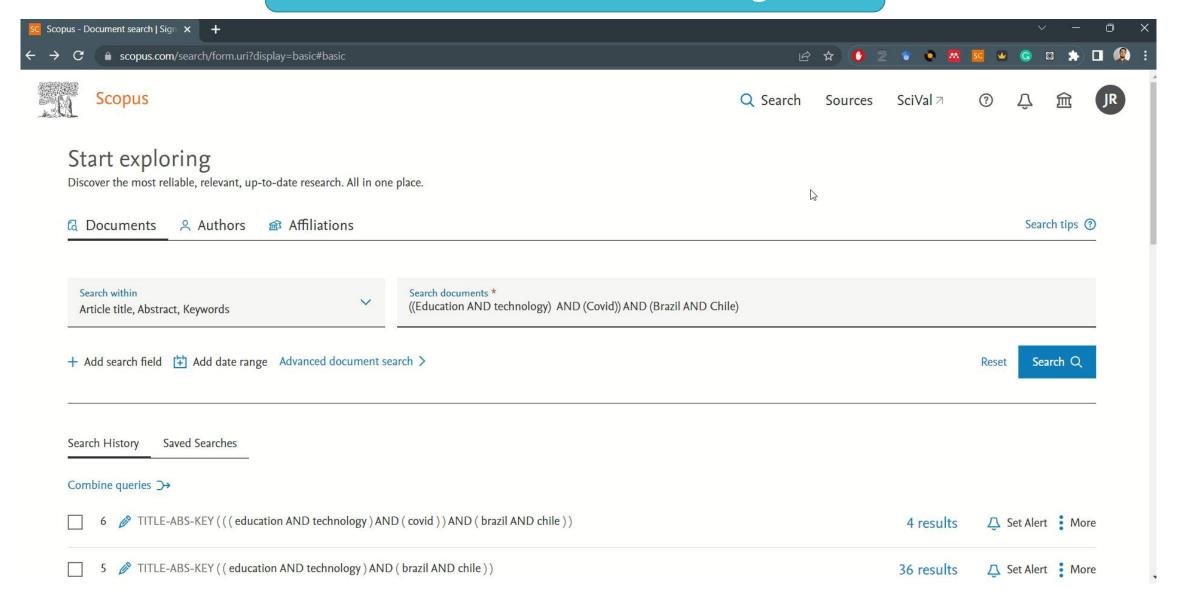




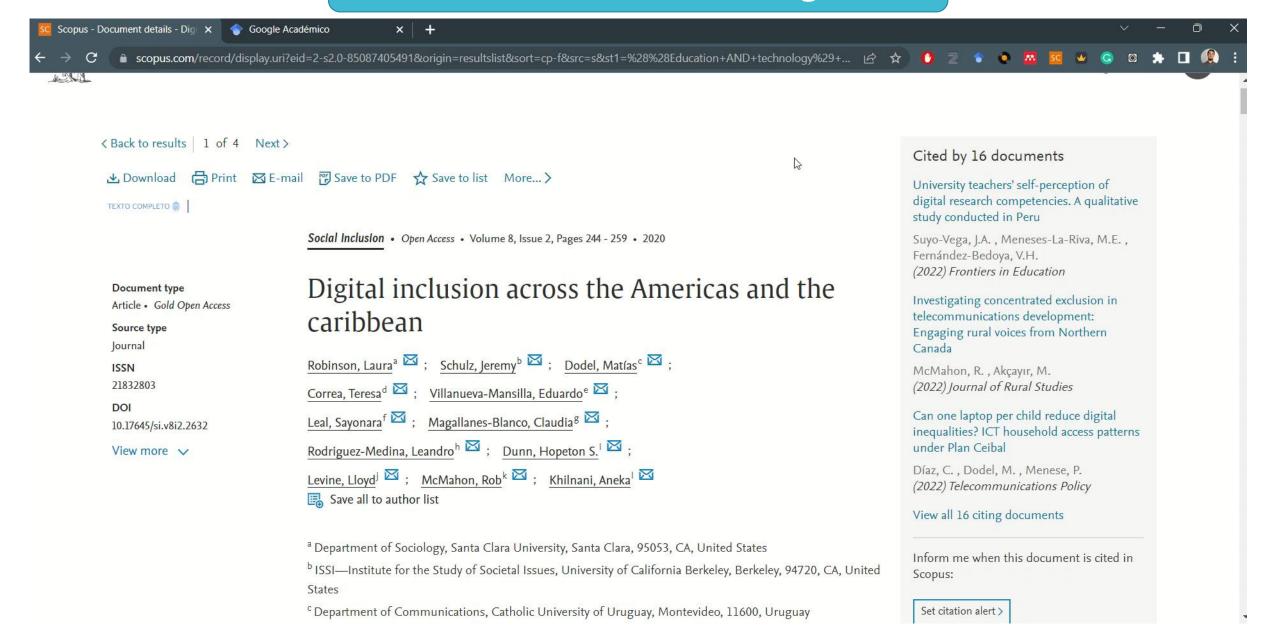
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## Backward snowballing



## Forward snowballing



### Trabajo individual

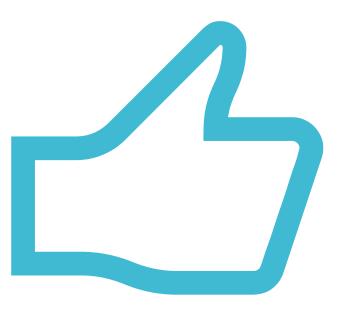
### Actividad

Elección de un tema: establecer <u>pregunta de</u> <u>investigación</u> que sea respondida con RSL

Establecer <u>palabras clave</u> (keywords). Delimitar criterios de inclusión (año, muestra, tipo de artículo, etc.)

Desarrollo de búsquedas y definición de la muestra

## Obrigado



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