

## Impact of Technological Tools for Reading Comprehension in Post-Pandemic Schoolchildren

Lidia Acuña-Torres<sup>1</sup>, Rocio Flores-Pezo<sup>2</sup>, Blanca Ines Lazo-García<sup>3</sup> and Milko Raul Rivera-Campano<sup>4</sup>

### Abstract

*Peru faces a crisis in the reading comprehension of primary school students, that is, they do not understand what they read, leading them to difficulty in achieving the other competencies within the basic education graduation profile, this attributed to the lack of educational resources, the socioeconomic gap and limitations in teacher training. National assessments show poor performance in reading skills, impacting academic development and restricting future opportunities. The purpose of this research is to analyze the impact of technological tools on students' reading comprehension after the pandemic in the last three years. The consultation of academic literature included 80 original scientific articles of pedagogical and theoretical experience, with a final sample of 20 articles specifically related to the impact of technological tools on reading comprehension. The methodology adopted was a quantitative approach with a descriptive design, using the article registration form as an instrument, along with systematic review, critical reading and paraphrasing techniques. The results obtained reveal the significant influence of technological tools in improving reading comprehension in students in the post-pandemic period. The interaction between teachers, students and families was highlighted, highlighting the need to develop digital skills in both teachers and students. In conclusion, the application of technological tools is positively influencing the reading comprehension and digital competence of students, transforming the role of the teacher in the educational process. It is recommended to continue training teachers to strengthen their digital and pedagogical skills, allowing them to plan appropriately and improve their pedagogical practice. This would ensure meaningful, high-quality learning, with technological tools as learning mediators, contributing to reducing the digital divide.*

**Keywords:** *Technological Tools, Reading Comprehension, Schoolchildren and Post-Pandemic*

## INTRODUCTION

Today, technological tools are a necessity in daily educational practice, to develop various actions and effectively meet the educational needs of students; This became more acute after the health emergency, where the education sector was faced with the urgent need to attend to students synchronously or asynchronously (Campos, 2023), bringing to light the digital divide, the lack of internet connectivity, poor equipment in schools, as well as the daily use by teachers of these technological tools and their application in the development of the sessions as a pedagogical practice (Deroncele-Acosta et al., 2021).

In addition, the COVID-19 pandemic has drastically transformed educational methods globally, driving an unprecedented integration of technological tools into the teaching and learning process (Carabelli, 2020). In this context, reading comprehension, a fundamental skill for students' academic development, has been particularly affected. With the gradual return to the classroom post-pandemic, there is a need to assess the impact that technological tools have had on the reading comprehension of schoolchildren, a crucial issue for designing effective educational strategies in the new educational landscape (Martinez, 2022).

However, in this post pandemic, in which children are studying in person, after passing from this new normality with a different way of learning (Gonzales-Sanchez et al., 2022) the use of the technological tool is a necessity in the educational task, in order to mediate the learning in the students, in such a way that it allows them to use it for the reading comprehension in attention to improve this competition, it is for that reason, the concern that the students of the primary level of the basic regular education achieve their autonomy in the use and application of the HT linked to programs that develop pedagogical practices of the literal, inferential

<sup>1</sup> Cesar Vallejo University, Perú. E-mail: [aacunato@ucvvirtual.edu.pe](mailto:aacunato@ucvvirtual.edu.pe), <http://orcid.org/0000-0001-5405-5304>

<sup>2</sup> Cesar Vallejo University, Perú. E-mail: [rflores22@ucvvirtual.edu.pe](mailto:rflores22@ucvvirtual.edu.pe), <http://orcid.org/0009-0005-6883-9878>

<sup>3</sup> Cesar Vallejo University, Perú. E-mail: [blancaines54@hotmail.com](mailto:blancaines54@hotmail.com), <https://orcid.org/0009-0006-8874-1349>

<sup>4</sup> National University of Moquegua, Peru. E-mail: [mriverrac@unam.edu.pe](mailto:mriverrac@unam.edu.pe), <https://orcid.org/0000-0002-4313-037X>

comprehension and of reflection of form and content making use of the diverse textual typologies, like: narrative, instructive, expository, descriptive, and argumentative (Minedu 2022).

In this sense, technological tools should be used by teachers to mediate learning, applied to methodology and didactics in terms of reading competence, from the planning and development of learning sessions that favour ICT interactions with students (Cateriano-Chavez et al., 2021). Furthermore, in the 2016 CNEB, the Ministry of Education has considered competence 28 as one of the transversal competences. This competence urges teachers to work with students on the ability to use, organise and select information from reliable and truthful sources from different virtual environments.

In addition, the COVID-19 pandemic has drastically transformed educational methods globally, driving an unprecedented integration of technological tools into the teaching and learning process. In this context, reading comprehension, a fundamental skill for students' academic development, has been particularly affected. With the gradual return to the classroom post-pandemic, there is a need to assess the impact that technological tools have had on the reading comprehension of schoolchildren, a crucial issue for designing effective educational strategies in the new educational landscape (Escobar et al., 2023).

A critical aspect to consider is the variability in access and familiarity with technology among students. While some schoolchildren may benefit greatly from educational applications, others may have faced significant barriers due to lack of appropriate devices or internet connectivity. This imbalance poses significant challenges for educators seeking to implement technology tools equitably and effectively (Estrada and Bannasar, 2021).

In addition, the abrupt shift to online education during the pandemic has highlighted the importance of human interaction and direct support in the learning process. Educators and parents have noted how the lack of face-to-face interaction can negatively affect students' motivation and engagement, critical factors for reading comprehension. Therefore, it is essential to investigate how technological tools can be better used to complement, rather than replace, traditional educational interactions (Martín, 2023).

Evaluating the impact of these tools on reading comprehension also requires a rigorous methodological approach. Studies should consider a variety of indicators, such as improvements in standardised test scores, student self-assessments and teacher observations. In addition, research should be extended to understand how these tools influence different age groups and socio-economic backgrounds, which would allow for a more complete and nuanced understanding of the post-pandemic educational landscape (Arguete, 2023).

Technological tools, ranging from online learning platforms to interactive applications and digital books, have offered unique opportunities to personalise and enrich the learning experience in reading (Helmer et al., 2022). These technologies not only allow learners to access a vast array of textual resources, but also offer interactive support that can be adapted to different skill levels and learning styles. However, the effectiveness of these tools in improving reading comprehension is still under scrutiny, especially in a scenario where many students may have experienced significant disruptions in their education due to confinement and remote teaching (Méndez and López, 2021).

According to the UMC (2022), the results of the national sample test showed very low levels in terms of the competence to read various types of written texts, in which students in the second grade of primary school achieved a satisfactory level of 17% and in the fourth grade 14%, as one of the transversal competences it is very lacking to have these results, Despite the fact that reading comprehension is a subject that has been addressed in several scientific researches, it is not prioritised to be implemented in the daily practice of the teacher in the classroom, when the teacher must implement the work with the students from the development of critical thinking, which allows them to build meanings with high cognitive demand (Gaibor et al., 2023), being necessary the timely follow-up within the pedagogical leadership focused on the achievement of the learning of the work of the directors, being a challenge to be achieved by teachers as part of their social responsibility and to attend the education as a right to the students of the primary level in this post pandemic care in a face-to-face manner.

Furthermore, the post-pandemic return to normalcy in education offers a unique opportunity to review and recalibrate the use of technological tools in reading instruction. Thoroughly investigating their impact on schoolchildren's reading comprehension is not only critical to closing the educational gaps exacerbated by the pandemic, but also to maximising the possibilities that technology can offer in future education. This analysis will help form the basis on which education systems can build more resilient and adaptive practices in today's changing world.

After conducting an academic analysis of the interest of this research, it was established as an objective to discover the impact of technological tools for reading comprehension in post-pandemic schoolchildren, by searching for relevant information through a review of current literature, this research was perceived as significant, thus allowing for future comparisons useful to the scientific community.

## **METHODOLOGY**

This study adopted the format of a review study, a methodology that is increasingly relevant due to the abundance of research in the scientific field. Reviews provide comprehensive summaries that offer an overview of recent research trends from specific perspectives, facilitating access to a large volume of studies for researchers and readers.

This study opted for a systematic review methodology, focused on synthesising and structuring relevant information on prison treatment programmes. This methodology, based on a clear and replicable procedure, comprises stages involving the retrieval, selection, analysis and presentation of the findings. The systematic review seeks a thorough and rigorous analysis of the academic literature, providing a detailed summary of current studies in the field. Guided by specific methodological proposals, this review aims to identify research directions, assess the impact of technological tools on the reading comprehension of post-pandemic schoolchildren. In this context, the review was supported by the methodological proposals put forward by Linares-Espinós et al. (2018), who define a clear procedure for its development, which is divided into the following stages:

- a) Acquisition of evidence: The protocol that will guide the organisation of the literature is established. In this study, we have chosen to use the PRISMA protocol, which provides a detailed and uniform structure for conducting a systematic review, ensuring transparency, completeness and reproducibility in the process.
- b) Evidence synthesis: The parameters for compiling and presenting the results of the selected studies are determined. The purpose is to discern similarities, variations and salient contributions of each reviewed work, which facilitates a comprehensive understanding of the most important research trends and findings in the field of technology tools.
- c) Drawing conclusions: A unified overview of the reviewed studies is sought, culminating in the development of essential conclusions derived from the synthesis and analysis of the evidence. In addition, limitations identified during the review process are highlighted, enabling critical appraisal and a full understanding of the results.

The implementation of this method enabled a systematic review, ensuring the integrity and reliability of the analysis performed. The adoption of the PRISMA protocol simplified the collection, selection and presentation of relevant studies, providing robustness and credibility to the results obtained, which allowed the research objective to be achieved.

Several databases, such as Dialnet, Latindex, SciELO, Scopus and Google Scholar, were used to retrieve relevant information. The search strategy was based on the combination of predefined keywords and the use of Boolean terms to optimise the results. Specific descriptors were used, such as "resources", "pedagogy", "education", "reading comprehension", "languages", "ICT" and "pedagogical resources".

A comprehensive and detailed search of relevant literature was carried out using several databases and well-defined search equations. Table 1 presents the inclusion and exclusion criteria, which were established for the

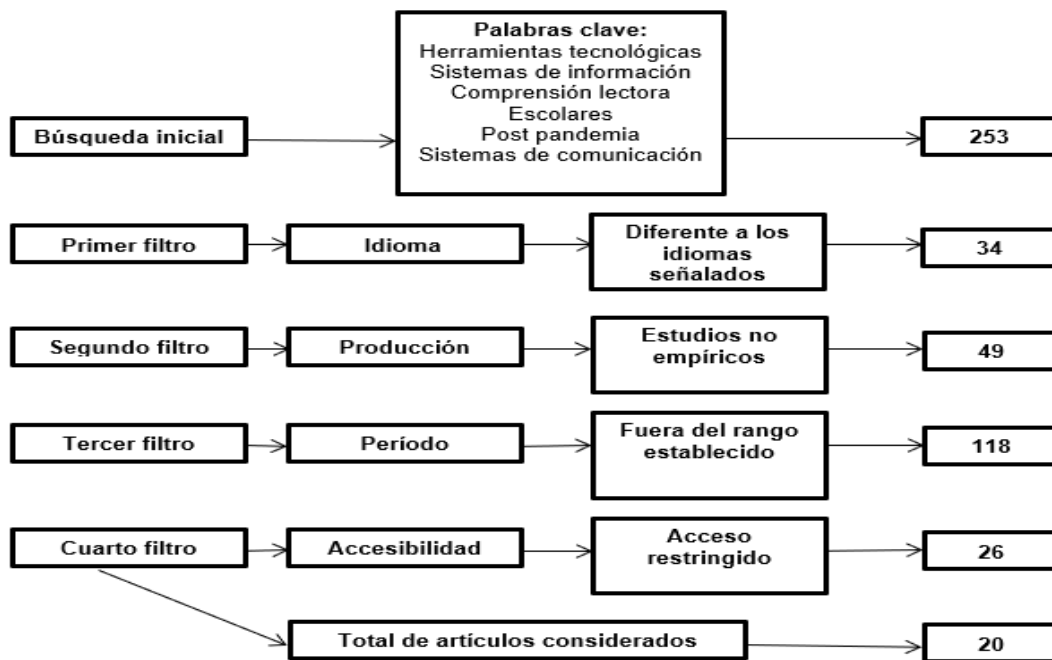
systematic selection of papers to be reviewed. These criteria were designed to assess the relevance of the studies, ensuring alignment with the research objectives and maintaining consistency in sample selection.

**Table 1 Inclusion and exclusion criteria**

Inclusion	Exclusion
<ul style="list-style-type: none"> <li>• Research with a publication date between 2017-2024</li> <li>• Scientific articles and theses in institutional repositories</li> <li>• Documents in English or Spanish</li> <li>• Open access documents</li> </ul>	<ul style="list-style-type: none"> <li>• Investigations prior to 2017</li> <li>• Opinion polls, editorials, blogs</li> <li>• Published in languages other than those indicated</li> <li>• With restricted access</li> </ul>

After defining the selection of studies, the information was organised and systematised using a spreadsheet in Microsoft Excel. In this spreadsheet, relevant information was compiled for each study, including authors' names, titles, objectives, and the main conclusions reached. This methodology provided a structured and detailed view of the various aspects dealt with in each of the selected documents, facilitating their comparison and systematic analysis.

The development of the research involved an initial search that yielded a total of two hundred and fourteen (n=214) documents related to the topic of study. However, to ensure relevance and consistency with the research objective, an exclusion process was implemented based on specific criteria, as shown in figure 1.



**Figure 1** PRISMA flow chart

*Note:* own elaboration.

In the first stage of exclusion, research published before 2017 was discarded, reducing the number of papers to eighty. In the second stage, opinion studies, editorials and blogs were eliminated, resulting in the exclusion of eighteen documents, leaving a total of sixty-two. In the third stage, documents in languages other than English or Spanish, as well as those with restricted access, were discarded, eliminating 45. This additional phase further reduced the sample, leaving a total of seventeen (n=20) documents that met the criteria for inclusion in the study. This rigorous selection guaranteed the quality and relevance of the reviewed papers in the context of

prison treatment programmes, ensuring that only the most relevant and appropriate studies were considered for the analysis and synthesis of the available evidence.

**Table 2 Main research selected on the basis of the inclusion and exclusion criteria**

N <sup>o</sup>	Author	Title of the research	Year	Source	Country	Database	Predominant digital skills categories	ICT tools used	Conclusion
1	Escobar et al. (2023)	Strengthening teachers' and readers' digital competences in third grade.	2023	University Teaching Journal	Spain	SCOPUS	Competence 1: Technological tools Competence 2: Communication	Wordwall and the Colombia Aprende platform	It is concluded that The proposal to use ICT to improve reading comprehension is promising as it suggests an innovative approach to teaching, and that the balance between technology and traditional approaches is essential to ensure a complete and equitable education.
2	Benavides, R. (2020)	ICT tools in school libraries as a pedagogical resource for reading comprehension in students at the San Juan Educational Institution, Trujillo-2019	2020	Institutional digital repository Alicia Magazine	Peru	SCOPUS	Competence 1: Technological tools Competence 2: Communication	ICT tools in school libraries	concluded on the importance of ICT tools in school libraries as a pedagogical resource are good and reading comprehension was improved in students.
3	Ulco et al (2020)	Information and Communication Technologies and their influence on literacy.	2020	Pedagogical Journal of the University of Cienfuegos	Quito Ecuador	SCOPUS	Competence 3 use of HTs	Use of ICT in reading and writing	The results show that both students and parents and teachers consider the use of ICT in the development of reading and writing to be important, i.e. this process has a high level of acceptance in the learning process. worldwide.
4	Palma, L. (2022)	Didactic strategy based on the use of the Leoteca platform in the Language and Literature area of the seventh	2022	Journal Scientific Research	Ecuador	SCOPUS	Competence 3 use of HTs	Use of ICT in reading and writing	The Leoteca global platform has improved reading practice by enabling the sharing of opinions, the creation of worksheets and

*Impact of Technological Tools for Reading Comprehension in Post-Pandemic Schoolchildren*

		year of basic education							active participation in efficient reading. This methodology has been implemented through a flipped classroom approach for elementary level students, fostering skills development and facilitating the exchange of views among students.
5	Aguas et al (2022)	Technological tools in the teaching process	2022	Latin American Journal of Social Sciences and Humanities Digital Publisher	Paraguay	SCOPUS	Competence 4 Importance of HT	Importance of HT in education	Effective use of technological tools in education requires careful planning and proper implementation on the part of the teacher.
6	Martin, E., (2023)	Use of technological tools in education	2023	Digital Publisher	Peru	SCOPUS	Competence 4 Importance of HT	Importance of HT in education	The use of various technological tools in teaching has been observed across different educational levels, according to the sources reviewed. Therefore, educators need to strengthen their digital and pedagogical competences, enabling them to teach and learn more effectively in line with the current educational environment.
7	Pin, P. and Mendoza, F., (2023)	Creative skills in the use of technological tools	2023	Science Latina magazine	Ecuador	SCOPUS	Competence 3 use of HTs	Use of ICTs	It is concluded that the low use of technological tools by teachers is due to a lack of resources and limited preparation for their use in the educational process.
8	Argueta, A. (2023)	Technological tools used in synchronous	2023	Guatemalan Journal of	Guatemala	SCOPUS	Competence 4 Importance of HT	Importance of HT in learning	Recognise creative skills in the use of

		sessions and their effects on learning		Higher Education					technological tools and their influence on the educational and learning process of students.
9	Barraez, D. (2022)	Metaverses in the Context of Virtual Education	2022	Educational technology journal for teachers	Venezuela	SCIELO	Competence 3 use of HTs	Use of HTs for greater understanding	The metaverse has great potential to change online education. Immersive virtual worlds offer a number of educational advantages, such as the ability to create personalised learning environments, promote collaboration and teamwork, and provide more engaging and stimulating learning experiences.
10	Estrada J., and Bennasar, M. (2021)	Educational training in and from Information and Communication Technologies (ICT) in secondary education: the challenge of today.	2021	Education Magazine	Costa Rica	SCOPUS	Competence 5 Utility of HT	Utility of ICTs	Widespread lack of awareness of ICT among students, lack of meaningful participation in educational exchanges using ICT, limited familiarity with ICT as a tool for educational exchange and limited willingness to study ICT as an educational option.
11	Barrios-Villar, E and Cotrino-Vargas, A. (2020).	Strengthening Reading Comprehension with Gamification Strategies Mediated by Ovas on the Moodle Platform in a Group of 6th Grade Students.	2020	Digital repository	Colombia	SCOPUS	Competence 5 Utility of HT	Utility of ICTs	Carrying out activities through Virtual Learning Objects (VLOs) on the Moodle platform, a virtual learning environment, facilitates and reinforces reading comprehension processes, which contributes to improved academic performance.

*Impact of Technological Tools for Reading Comprehension in Post-Pandemic Schoolchildren*

12	Ortega, B., (2022)	Role of metacognitive strategies	2022	RIED revista Iberoamericana	Spain	WOS, SCOPUS	Competence 6 HT as a medium for metacognitive teaching	HT as a medium for teaching	It is determined that technological tools play a crucial role as a means to implement metacognitive strategies, in blended learning, in order to enhance study habits and reading comprehension in students, and consequently improve their learning outcomes.
13	Martinez et al (2022)	Information technology in student academic performance	2022	Venezuelan Journal of Management	Venezuela	WOS, SCOPUS	Competence 6 HT as a medium for teacher-student-ICT interactions	HT as a medium for interactions	The relevance of technological tools in the field of education is highlighted, seeking to enrich further research that focuses on identifying the elements that influence academic performance.
14	Carabelli, P., (2020).	Response to the COVID-19 outbreak: virtual teaching time. InterChanges. Dilemmas and Transitions in Higher Education,	2020	Scielo Analytics Journal	Uruguay	SCIELO	Competence 6 HT as a medium for technology such as: Online classes and virtual surveys	HT as a medium for teaching	It is clear from these unexpected educational experiences that there is significant potential in this modality. It would be beneficial to expand the offer of virtual courses to provide students with more diverse options in their choice of subjects.
15	Rodríguez, G. and Cortez, G. (2021)	Technological mediation in the promotion of reading and writing in adolescents.	2021	Synectica Magazine	Mexico	SCIELO	Competence 6 HT as a medium for reading	HT as a means of learning and teaching	The incorporation of Information and Communication Technologies (ICT) into reading and writing instruction is presented as an effective tactic for cultivating these skills in upper



16	Méndez, E., López, M. (2021)	Using a digital whiteboard for student participation in distance education	2021	Información tecnológica magazine	Chile	SCIELO	The application of the digital whiteboard in education	HT as a medium contributing to students' understanding of abstract concepts	secondary school students. Technological tools serve as a medium that facilitates students' abstract understanding, fosters interaction, promotes the construction of ideas and stimulates active participation, encouraging them to make commitments.
17	Mhlongo et al. (2023).	Challenges, opportunities and prospects for adopting and using smart digital technologies in learning environments: an iterative review.	2023	ECLAC Elac	USA USA	SCIELO	HT as a means for learning	HT as a medium for teaching	The use of technological tools such as the digital whiteboard as a means of teaching and learning generates a significant change in education by building knowledge, and broadens and enriches the learning environment.
18	Helmer, J., Minh, T & Rossano, S. (2022)	Teaching digital innovation processes for services in Higher Education.	2022	ELSEVIER	Germany	WOS, SCOPUS	The application of digital innovation processes in education	HT as a process in teaching	The educational application of digital developments in teaching is based on adopting good practices so that teachers can implement them and improve their pedagogical approach through innovation.
19	Haleem et al. (2022)	Understanding the role of digital technologies in education.	2022		India	WOS, SCOPUS	The integration of technologies in education ensures quality education in the use of software and tools for the creation of presentations.	HT as an impact on education	Technologies transform education by introducing innovative ways of applying knowledge, providing information, mentoring and assessing learning through the use of software and

20	Wenwei et al (2021)	Are early childhood teachers prepared for the digital transformation of education in mainland China?	2021	China	WOS, SCOPUS	Using HT to optimise the holistic development of learners	Integrating technology into learning	technological tools. The integration of technology and the generation of questions in teaching functions.
----	---------------------	--	------	-------	-------------	---	--------------------------------------	--

### Publications by Country of Origin

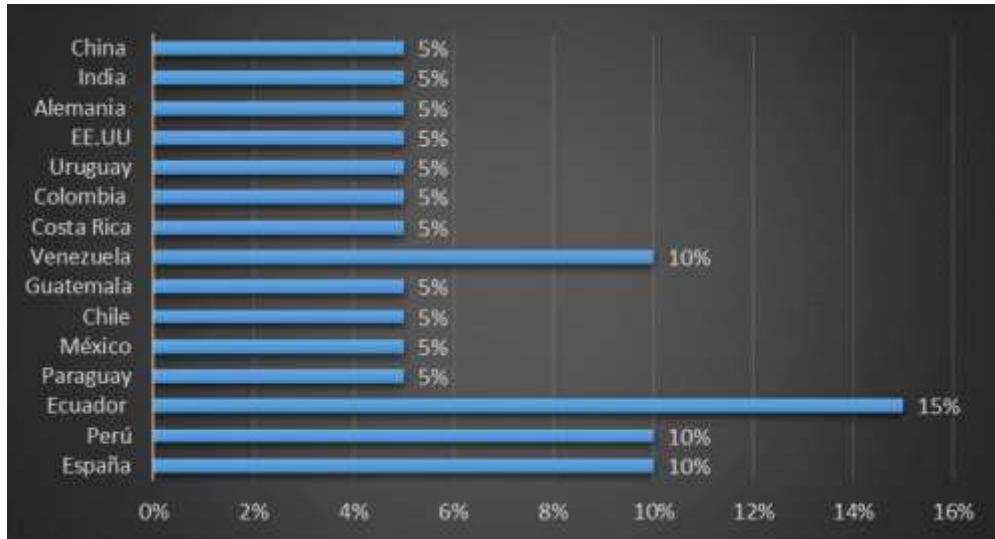


Figure 2 Documents by year

Note: own elaboration.

Figure 2 shows the analysis allowed by the review of the analysis by country of origin of the documents. It shows a predominance of 15% (3) in Ecuador. On the other hand, 10% (2) are positioned in countries such as Venezuela, Peru and Spain. Finally, 5% is distributed in a similar way among countries such as China, India, Germany, the United States, Uruguay, Colombia, Costa Rica, Guatemala, Chile, Mexico and Paraguay.

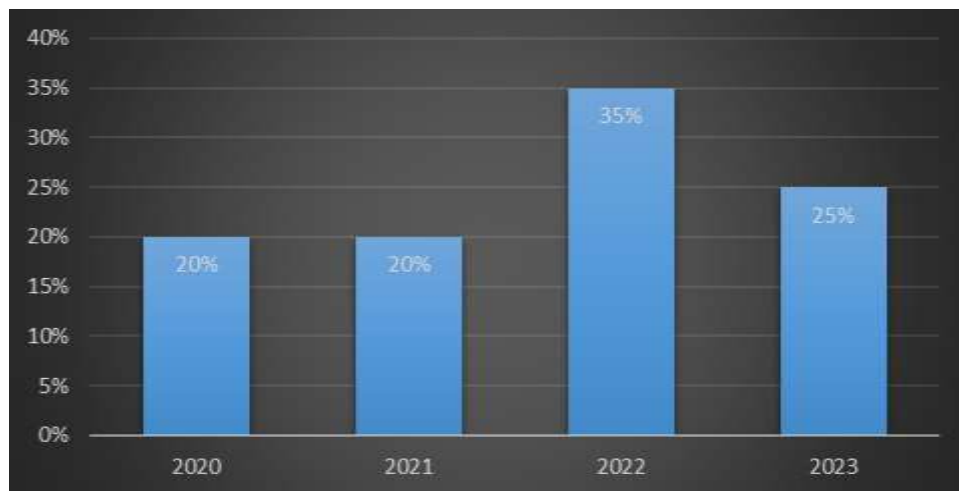
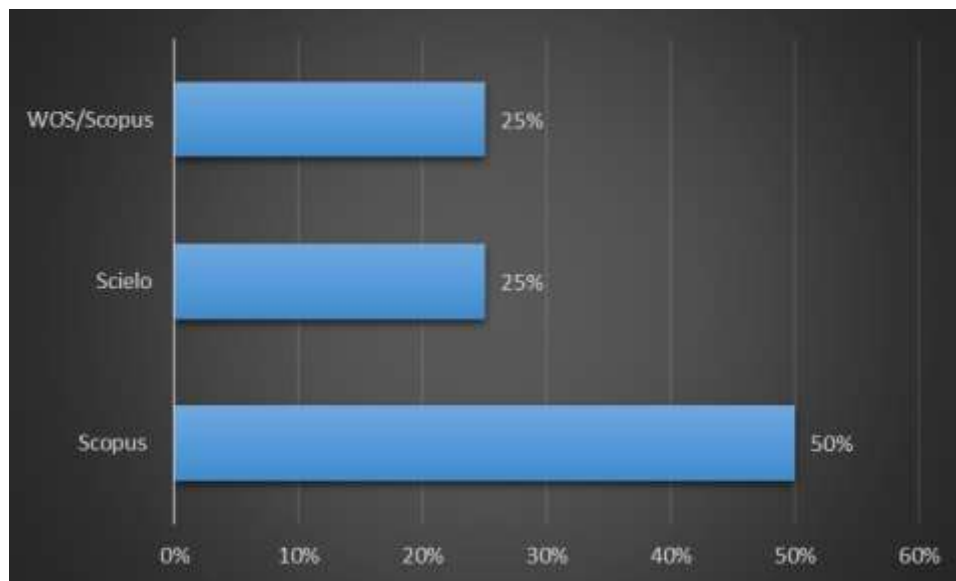


Figure 3 Frequency of publication

Note: own elaboration.

Figure 3 shows the annual production of the articles established within the review. It is evident that 35% (7) of the publications have been published in the year 2022; 25% (5) are established in the year 2023. Finally, 20% (4) are positioned in the years 2020 and 2021.

### Research Databases



**Figure 4** *Databases*

*Note:* own elaboration.

The analysis of the frequencies of the databases established within the review enquiry is shown in figure 4. It is clear that 50% (10) of the resources obtained are established within the Scopus database. On the other hand, 25% (5) are divided between the Scielo and WOS/Scopus databases.

### RESULTS AND DISCUSSION

The review of the articles related to the topic of interest made it possible to identify certain points in common, such as: For Ulco et al. (2020), HTs are a means for the acquisition of reading, as they allow interactions between student, teacher, extending to the home with their parents, due to their high level of acceptance. For his part, Palma (2022), proposes the use of the digital platform Leoteca to improve reading in secondary school students, allowing them to share opinions, create cards and actively participate in efficient reading, where the teacher applies an inverted classroom approach to teaching. Likewise, Pin and Mendoza (2023), recognise the development of students' creative skills and abilities when using HTs, for which these resources must be available and teachers must be properly prepared to provide quality education in accordance with the 21st century.

Carabelli (2020), proposed that for effective online classes, ICT should be used as it is a significant potential for this modality, also, Martinez et al. (2022), indicated that the HT by promoting its constant use in the classroom leads to the improvement of academic performance in students, since in this new presentiality responds to the way students learn and develop as long as it responds to that educational purpose. In addition, Rodriguez and Cortez (2021), have defined as an effective tactic to cultivate these skills in students.

In turn, Aguas et al. (2022) highlighted the importance attributed to the effective use of technological tools in education. The authors highlighted that this approach demands meticulous planning and precise execution by educators. The need for careful consideration in the implementation of these technologies to ensure their effectiveness was underlined. Emphasis was placed on the crucial role of teachers in this process, underlining

their responsibility for the successful integration of technological tools into the educational environment. It was also highlighted that the incorporation of these technologies requires a reflective and adaptive pedagogical strategy to meet the changing needs of learners.

Martin (2023) also argues that HT provides an environment conducive to active and dynamic collaboration between teachers and students. He stresses that this innovative interaction not only strengthens the digital skills of the teacher, but also those of the students. Martin highlights the ability of HT to promote an educational approach that encourages participation and interactive learning, generating a positive impact on the development of skills for both educators and students.

Furthermore, Wenwei et al. (2021), emphasise the integration of HT for learning to optimise the transition to digital learning, with an emphasis on question generation, while Medina et al. (2020), specify the multiple perspectives and critical analyses that focus on the preparation of competent professionals, in line with both their human and academic development.

Importantly, Haleem et al. (2022) argue that the integration of HTs in education ensures quality, inclusive and equitable education and transforms education by introducing innovative methods of applying knowledge, providing information, mentoring and assessing learning through the use of software and technological tools.

Finally, within the indication, the following aspects are reached:

**Post-Pandemic Context:** The COVID-19 pandemic brought about an unprecedented transformation in the education sector, forcing the accelerated adoption of digital technologies. This radical change provides a unique context for assessing how technological tools have influenced school children's reading comprehension. It is essential to understand this background in order to contextualise the pedagogical findings and adaptations that emerged during and after this period.

**Technology Integration in Education:** During the pandemic, e-learning platforms, digital books, interactive reading applications and other technological resources became essential tools for teaching. Analysing how these tools were integrated into curricula and their uptake by both teachers and students is crucial to understanding their impact.

**Measuring Reading Comprehension:** Reading comprehension can be measured through a variety of methods, including standardised tests and formative assessments. Investigating how these assessment tools have been adapted or developed to incorporate technological components offers insight into the effectiveness of technologies in measuring reading comprehension in virtual environments.

**Results of Studies and Publications:** Analysing recent studies on the use of technology in reading comprehension can reveal patterns and trends. These studies may come from academic databases such as JSTOR, ERIC, or Google Scholar, and provide evidence on the benefits or challenges associated with the use of specific technologies.

**Regional and socio-economic differences:** It is critical to consider how the impact of technology tools on reading comprehension varies across regional contexts and socio-economic conditions. This includes examining the digital divide and how it affects students in different environments, from urban areas with easy access to technology to rural regions where there may be significant limitations.

**Educator and Student Perspectives:** Collecting and analysing educators' and students' perceptions of technology tools offers important insights into their usefulness and acceptability. Surveys, interviews and case studies can provide valuable qualitative data to complement quantitative findings.

**Technological innovations:** Exploring recent technological innovations that have been specifically designed to improve reading comprehension can shed light on future directions in education. This includes interactive apps, augmented reality, and educational software that personalises learning.

**Challenges and Barriers:** Identifying the challenges and barriers to implementing effective technology tools is essential to understanding existing constraints. This may include technical problems, resistance to change on the part of teachers, or lack of adequate training to use these tools effectively.

**Long-term impact:** Considering the long-term impact of these tools on education is crucial. This involves analysing how prolonged exposure to digital education can change students' reading and learning habits, and what consequences this might have for their future academic development.

**Conclusions and Recommendations:** Finally, the findings need to be synthesised to formulate conclusions about the actual impact of technology tools on post-pandemic reading comprehension. Furthermore, recommendations should be offered for educators, technology developers and policy makers to improve the integration of these tools into education systems.

## CONCLUSIONS

Through the academic analysis, it was possible to reveal the remarkable influence of technological tools in improving reading comprehension in students in the post-pandemic period. This impact was evidenced by recognising the growing need to comprehensively develop this skill by actively addressing it in the educational environment through the use of technological tools. This change was motivated by the new educational landscape that emerged during the pandemic, highlighting the relevance of integrating technological tools as a medium in the educational process.

The influence of technological tools, used as instruments to achieve reading comprehension and digital competence in students, leads to a transformation in the role of the teacher in their educational task. This implies that the educator must go beyond mastery of their specific discipline, incorporating the internalisation and application of these digital tools. This is essential to ensure meaningful and high quality learning in this era of knowledge in society.

## REFERENCES

- Aguas et al (2022). Technological tools in the teaching process. Revista latinoamericana de ciencias sociales y humanidades Digital Publisher. Territorial configuration of the provinces in Colombia.
- Argueta, A. (2023). Technological tools used in synchronous sessions and their effects on learning. Revista Guatemalteca de Educación Superior, 6(2), 11-25.
- Benavides, R. (2020). ICT tools in school libraries as a pedagogical resource for reading comprehension in students of the San Juan Educational Institution, Trujillo-2019.
- Barraez, D. (2022). Metaverses in the Context of Virtual Education. Revista Tecnológica-Educativa Docentes 2.0, 13(1), 11-19.
- Barrios-Villar and Cotrino-Vargas, A. (2020). Strengthening Reading Comprehension with Gamification Strategies Mediated by Ovas in the Moodle Platform in a Group of 6th Grade Students.
- Carabelli, P., (2020). Response to the COVID-19 outbreak: virtual teaching time. InterChanges. Dilemmas and Transitions in Higher Education. Scielo Analytics.
- Escobar et al. (2023). Strengthening digital teaching and reading skills in third grade. Revista Docencia Universitaria.
- Estrada and Bannasar (2021). Educational training in and from Information and Communication Technologies (ICT) in secondary education: today's challenge. Education Journal.
- Gaibor et al. (2023). Reading comprehension as a foundation for critical thinking. Ciencia Latina Revista Científica Multidisciplinar. March-April, 2023, Volume 7, Number 2. <https://doi.org/10.37811/clrcm.v7i2.5985>
- Gonzales-Sánchez et al. (2022). The new normality in the reopening of schools. Enrique Guzmán y Valle National University of Education.
- Haleem et al. (2022). Understanding the role of digital technologies in education. Understanding the role of digital technologies in education: A review, Sustainable Operations and Computers, Volume 3, 2022, Pages 275-285, <https://doi.org/10.1016/j.susoc.2022.05.004>
- Helmer, Minh & Rossano, (2022). Teaching digital innovation processes for services in Higher Education. University of Applied Sciences, Science-to-Business Marketing Research Centre, Johann-Krane-Weg 23, 48149 Münster, Germany.
- Martin, E., (2023). Using technology tools in education. Digital Publisher.
- Martínez, E. and Martínez, M. (2021). Didactic strategy mediated by ICT to strengthen reading comprehension. Corporación Universidad de la Costa. <https://repositorio.cuc.edu.co/handle/11323/8178>
- Martínez et al (2022). Information technology in student academic performance. Revista Venezolana de Gerencia.
- Méndez, E., López, M. (2021). Use of a digital whiteboard for student participation in distance education. Computers & Electrical Engineering, Volume 93, 107268, <https://doi.org/10.1016/j.compeleceng.2021.107268>.

*Impact of Technological Tools for Reading Comprehension in Post-Pandemic Schoolchildren*

- Minedu (2022). Currículo Nacional de Educación Básica, 2016, Lima Peru.
- Minedu (2023). Unidad de la Medición de la Calidad Educativa, resultados de la prueba muestral del segundo y cuarto grado de primaria, Lima Perú.
- Mhlongo et al. (2023). Challenges, opportunities and prospects of adopting and using smart digital technologies in iterative learning environments. *Heliyon*, Volume 9, Issue 6, 2023, e16348, <https://doi.org/10.1016/j.heliyon.2023.e16348>.
- Ortega, B., (2022). The role of metacognitive strategies. *RIED-Revista Iberoamericana De Educación a Distancia*, 25(2), 219-238. <https://doi.org/10.5944/ried.25.2.32056>.
- Palma, L. (2022). Teaching strategy based on the use of the Leoteca platform in the area of Language and Literature in the seventh year of basic education.
- Pin, P. and Mendoza, F., (2023). Creative skills in the use of technological tools. *Latin science journal*.
- Rodríguez, G. and Cortez, G. (2021). Technological mediation in the promotion of reading and writing in adolescents. *Revista Sinectica*.
- Ulco et al (2020). Las tecnologías de la Información y Comunicación y su influencia en la lectoescritura. *Pedagogical Journal of the University of Cienfuegos*.
- Wenwei et al (2021). Are early childhood teachers ready for digital transformation of instruction in Mainland China? A systematic literature review, *Children and Youth Services Review*, Volume 120,2021, <https://doi.org/10.1016/j.chilyouth.2020.105718>