

# Multimodal digital writing and the development of skills for textual production in primary school children

La escritura digital multimodal y el desarrollo de habilidades para la producción textual en niños de educación básica primaria

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## Abstract

The research addresses the issue of the multimodal digital writing impact on the development of textual production skills in primary school students. The objective was to explore how virtual environments, rich in ICT resources, and a transformational pedagogy can enhance reading and writing, encouraging autonomous and situated textual creation. The method used is qualitative and interpretative, with a non-experimental design, aimed at a comprehensive exercise of school reality in the learning of writing. The outcomes turn around the need to articulate curricular practices in order to have a clear pedagogical line regarding communicative skills, with an effective and well-founded mediation of ICT and the multiple scenarios that virtuality and technological development open to education. It is concluded that multimodal digital writing allows progress in the transformation of the teaching and learning processes of textual production.

## Keywords:

Digital writing;  
Multimodality; Text  
production; Virtual  
environments; ICT;  
Digital resources.

## Resumen

La investigación aborda la temática del impacto de la escritura digital multimodal en el desarrollo de habilidades de producción textual en estudiantes de primaria. El objetivo fue explorar cómo los entornos virtuales, ricos en recursos TIC, y una pedagogía transformacional pueden potenciar la lectoescritura, fomentando la creación textual autónoma y situada. El método empleado es cualitativo de corte interpretativo, con diseño no experimental, dirigido a un ejercicio comprensivo de la realidad escolar en el aprendizaje de la escritura. Los hallazgos giran en torno a la necesidad de que se articulen las prácticas curriculares para contar con una línea pedagógica clara respecto a las habilidades comunicativas, con una mediación efectiva y fundamentada de las TIC y los escenarios múltiples que abre la virtualidad y el desarrollo tecnológico a la educación. Se concluye que la escritura digital multimodal permite avanzar en la transformación de los procesos de enseñanza y aprendizaje de la producción textual.

## Palabras clave:

Escritura digital;  
Multimodalidad;  
Producción textual;  
Entornos virtuales;  
TIC; recursos  
digitales.

## INTRODUCTION

**A**s a result of the pedagogical scenarios transformation with the increase of ICT and virtuality, there has been a growing concern for innovation and the use of digital tools in learning. This process is not unfamiliar to the development of communication skills, but rather it surpasses and integrates them into a new way of understanding and producing written language. Both reading and writing are redefined in a scenario where virtuality prevails, with increasingly complex and powerful forms of expression through text. Precisely because of these changes in textual learning, it is understood that there is an urgency to address the dynamics of digital writing, as it is emerging as the predominant form of communication in the new communication scenario of the knowledge and information society (Castells, 2007).

Hence, the research is projected to the analysis and formative proposal for the learning of multimodal digital writing, that is, the one that makes use of multiple channels, forms and contents to express a message that impacts on different senses at the same time (Kress, 2010), considering that this emerging form of written textuality will demand from people, even from the first years of schooling, the development of skills in textual production and its subsequent consolidation in virtual communicative environments that surpass the traditional analog structures: paper is replaced by screens, sound and electronic hypermediation.

Following this perspective, the aim is to provide a pedagogical and communicative experience that allows the scope of writing practices to be expanded from the school setting, in such a way that two different worlds are not created in the use of digital text, but rather that they are integrated around the communicative potential of new media and forms of writing. Of course, this will be possible based on the recognition and use of the diversity of innovative resources offered by ICTs (Piscitelli, 2019), while enabling a pedagogical and didactic practice of reading and writing processes in basic primary education that is based on a constructive, integrative and interactive learning model.

Similarly, it is suggested that new language pedagogy cannot be unknown to the growing and changing experiences of creative, autonomous and text situational production in a scenario of digital and electronic mediation (Herrero, 2019). This goes hand in hand with the understanding that writing, as a cultural product, is also historical and therefore susceptible to changes in communication technology: one can think, as an example, of the progressive transformations from clay to papyrus and paper, or from the stylus to the pen, pencil and

typography. In this sense, how much more significant can the transition from analogue to digital be in writing?

Against this changing setting, this research hopes to provide pedagogical criteria to guide educational action and forms of digital writing towards a multimodal and dynamic conception of text, which will translate into greater skills to express oneself in writing and to fully understand what is read. It is clear that communicative situations and processes in the world of digital multimedia involve different and increasingly complex forms of textual production (Chaverra & Gil, 2017), so the mere idea of handwritten writing will not be enough to achieve communicative and linguistic competence, but as progress is made in the requirements of a multimodal text, new and better writing or textual production skills will be required, which will require greater management of ICT and the ability to build scenarios in virtuality, especially because today:

- Children are exposed to ICTs at an early age
- It implies a change in the conception of language
- Learning becomes broader and more complex
- The school must be able to respond to changes from conventional to innovation

In the case of this research, it is located in a public educational institution, situated in a low socioeconomic environment, characterized by a high rate of unsatisfied basic needs, with the presence of risk and vulnerability situations for students, an increase in dysfunctional families, a lack of protective environments and a limitation in the supply of goods and services that improve the quality of the inhabitants life.

According to the SABER results (ICFES, 2021) obtained by the Institution for the period between 2014 and 2017 in the 3rd grade of EBP, the percentage of students at an advanced level increased relatively and is proportionally higher than the indicators of the territorial entity and national for the same period. In terms of average, the Institution is above the territorial entity (department) but below the national total. On the other hand, in terms of performance levels, and despite consistent progress since 2015, in absolute terms, the Institution is predominantly located in the minimum and insufficient indicators.

The above allows to characterize to a large extent the educational and pedagogical problems based on the limitations in the quality of the curricular processes, since, despite the transformation perceived and assumed as necessary by the 21st century school, low performance is detected in the language area, as evidenced by the results in the national census tests (SABER) and international (PISA) in which difficulties in comprehension, critical and pragmatic reading are reported, related in turn to deficiencies in reading and writing learning

from early education (Cardozo, 2018), low reading time, lack of innovation in textual didactics and the disconnection between educational scenarios for the promotion of reading, a situation recognized by different official and private studies (MEN, OEI, Fundalectura). However, this problem is also associated with the insignificant learning of writing, both conventional and digital, in the sense that textual production is not contributing to the competent appropriation of language, observing that basic primary education students in the first grades:

- They do not demonstrate sufficient skills in the production of short coherent texts and allow for fluid expression
- They have low motivation to write in classroom or outside.
- There is no acquisition of consistent writing practices, such as handwriting, the creation of graphic organizers, and the use of creative or imaginative writing.
- Dictation-copying in the notebook predominates as a writing practice.
- There are grammatical, semantic, textual and contextual deficiencies for independent writing.
- They do not have fluency and adequate command of vocabulary in accordance with their mental age and cognitive development.

Likewise, in the context of the institution, there is a poor integration of digital tools in school learning experiences, both due to the lack of ICT resources and the conceptual and design distance that exists between the traditional curriculum and new learning practices (Neva, 2021), which go far beyond the sporadic application of tools and strategies and which, instead, require an authentic model of pedagogical and curricular innovation that allows a fluid transition from analog to digital and vice versa (Ruíz, 2019) in knowledge and learning, which necessarily affects language.

So, how can multimodal digital writing experiences foster text production skills in elementary school students in a public educational institution? This question is used to establish a relationship between the two central categories of the research: communication skills and multimodal digital writing, as they are experiences in school learning and language as a socio-historical construction that evolves and develops as major changes occur in knowledge, science, technology and humanity itself. Both the school environment characterized by competent teaching and learning experiences in reading, writing, speaking, listening; as the technological environment marked by innovations on the Internet, such as social networks, blogs, websites and audiovisual products, determine new horizons for education and pedagogical practice that translate, for this particular case, into the essential assumption that learning experiences with multimodal digital writing favor the development of skills to

produce texts (Colunga, Martínez & Vidal, 2021), using the creative advantages and communicative dynamics of digital resources with which primary basic education students have contact in their daily lives.

Consistent with the above assumption, the research aims to analyze, from the interactional sociolinguistics of the text, the development of communicative skills in multimodal digital writing experiences by primary school students from a public educational institution in the municipality of Arjona - Colombia, for which a series of specific actions are arranged. They include:

- Characterization of the communication skills present in primary basic education students.
- Establishment of the school teaching-learning processes associated with multimodal digital writing.
- Observing the conditions for the development of communication skills and their articulation with digital writing experience in the classroom.
- Redefinition of text production learning and comprehension based on writing experiences in digital settings.
- Proposal of pedagogical and curricular criteria for the multimodal digital writing processes integration with text production skills.

Considering the object of the research complexity, a three-dimensional theoretical approach has been suggested. It integrates communicative skills, understood as autonomous capacities to exercise language competence when speaking, listening, reading and writing, processes that are assumed in the line determined by Hymes (2015) and Bruner (2002), among others, as well as the social implications that these skills have in the construction of language, as pointed out by Gumperz (1972) and Diamond (1974); aspects that are essentially related to the so-called pedagogy of the text, in which the meaning of this is specified as a structural unit of discourse that fulfills a communicative, cognitive, evaluative and cultural linking function.

This broad vision, presented by Ferreiro and Teberosky (1979), van Dijk (2000) and Nemirovsky (1999), among others, highlights the importance of the writing and reading acts and the processes of textual production and comprehension, in which neurobiological, psychocognitive and socio-affective elements are involved, which give meaning to this particular reading-writing binomial. And it is precisely around the transformations experienced by the latter that digital writing is proposed as a third theoretical component, referring to any form of text construction that uses electronic-virtual media, as Cassany (1999), Castells (2007), Lankshear and Knobel (2008a) point

out, and that in its production can use sound, visual, analogue and simulated elements to obtain communicative content, configuring what is known as multimodality. Of course, this perceived change in the way of writing requires certain conditions of mastery in the virtual universe, where digital literacy is assumed (Cassany & Casstellà, 2010) as a necessary literacy factor of our time and demanding new and better learning supported by ICT.

Due to this broad theoretical overview and the art state in terms of textual production skills related to digital writing, it is necessary to define an epistemological perspective that has been initially defined along the lines of textual production redefinition in virtual scenarios that includes five critical points: first, the development of language and communicative skills from an integrated vision of sociolinguistics and pragmatics, involving the natural-social development of language, discursive interactionality and the intentionality of what is expressed; second, writing from a psycholinguistics perspective, prioritizing the origin and evolution of the written word and the neurocognitive processes involved in it; third, the text, viewed from the integration of structures and levels in the processes of textual production and comprehension (Rose & Martin, 2012); fourth, digital writing as a text transformative action in which its non-conventional and multimodal characteristics and potentialities are involved (Lankshear, & Knobel, 2008b); and fifthly, the pedagogical and didactic practice of the text under a form of constructivism that shares aspects of Vygotsky's sociohistorical approach and Ausubel's meaningful learning.

As it can be seen from this epistemological perspective, the development of communicative skills through multimodal digital writing experiences strives to create new conceptual and practical horizons for textual learning in primary education, a need detected and demanded on the way towards educational transformation and qualification in the knowledge society.

## METHOD

**I**n order to achieve the main objective of the study, a particular and in-depth methodology is adopted, with a combination of resources that enhances and responds to the multidisciplinary approach of the research. In this way, the paradigm corresponds to the interpretative, aimed at a comprehensive exercise of the school reality in the learning of writing, for which the appropriate approach turns out to be

qualitative in nature, with a non-experimental design, because it is not about controlling or intervening in variables, and transversal because it is developed in a specific time period. The research typology is that of Interactional Sociolinguistics with a method called contextualized sociosemantic analysis, which is developed through three stages: problem recognition, the study phenomenon theoretical-practical redefinition and the outcomes made; and the transformation of the writing practice that is projected onto the curricular processes in the teaching-learning of language.

Taking into account the aforementioned methodological particularities, the design of interactional sociolinguistic research responds to a generative cycle of pedagogical praxis in communicative skills through multimodal digital writing, in which we can specify that the investigative stages give way to moments of diagnosis, foundation, evidence of findings and discursive assessment of them, which leads to the emergence of new problems and approaches that would merit advancing much further along the defined disciplinary or multidisciplinary line.

The rationale for this design is that interactional sociolinguistics works on the processes of contextualized constructions and interpretations of meanings from which interlocutors establish relationships between what is expressed in the interaction situation and the knowledge acquired from other discursive and textual experiences, in such a way that the process of multimodal digital textual production can be clarified, since from an early age subjects come into contact with multimodality, virtuality and hypermediation. In this case, the analysis of discursive strategies within the multimodal digital text is deepened, which allow, in different contexts, to verify the connection between the meanings constructed by the participants and the social relationships they establish, in which it is possible to recognize how interlocutive and interactive relationships are organized in concrete contexts, communicative skills are re-signified and the value of writing is re-signified from digital writing acts, multimodal conversational devices and discursive practices that allow the construction of discursive roles in virtual environments.

The sample is selected by convenience or by criterion and includes 30 second grade students, without discrimination by sex or age range, and independently of their academic level. The group of teachers corresponds to 5 subjects, who are teachers in the area of humanities and language who work at the institution selected for the research.

The selected group is subject to data collection techniques and instruments that include observation through field diaries and audiovisual records; interviews using semi-structured guides; textual production workshops designed specifically for digital writing, which have application guides for the available ICT tools; and; the analysis of textual production that has assessment instruments for the guided production and the written texts autonomous production.

## RESULTS

**D**igital writing is the one that makes use of electronic media to produce written text (Neva, 2021). And we speak of multimodality (Stein, 2008) when it allows the integration of various elements such as image, sound, hypertexts, audiovisuales, whether online or not, into its production. Its growth is especially evident in the content of social networks, configuring what is known as digital literacy, that is, a form of literacy that is related to virtuality and ICT. Today, people experience digital writing on a daily basis and therefore it is important that from primary education and throughout the entire training cycle, skills and competencies are acquired for effective and meaningful communication with these media.

In general, writing is perceived as a tedious, rigid task, subject to a lot of formality and carried out repetitively and even as a punishment in the classroom. Logically, the level of structure that writing has compared to oral language is much greater and demands a great amount of knowledge and application of linguistic, grammatical and communicative processes that require a constant and progressive learning effort (Fuenmayor & Villasmil, 2013), and if that experience is not very motivating or attractive for the student, the result will be aversive and frustrating as it happens to many of our students. Then they have neither the interest nor the motivation to be writers.

In contrast to the lack of motivation for conventional writing, multimodal digital text production offers interest, novelty and the possibility of bringing into play creative, attractive and significant elements for individuals, such as ICT, audiovisual resources, expressive flexibility and creativity to be able to communicate what someone wants. This is a first step towards bringing the student closer to the world of writing, combining the different verbal and non-verbal elements with the text and expanding the application scenarios of communication skills.

Firstly, it is an innovation conceived and implemented from pedagogical practice that can improve the quality of education and be reflected in the academic results of students. Secondly, there is a clear orientation towards the development of skills and competencies, as well as the permanent construction of language, which always makes use of those transformations that occur



in the context to reach new communicative forms (Boza, 2017). The main contribution is found in the students textual production increase, which results in communication skills, cognitive and intellectual development thanks to the opportunity to have better knowledge experiences, which are necessary in the present and towards the future of the computerized society; it does not represent the abandonment or loss of written culture, but rather its enrichment and transformation (Amador, 2021).

The central axes that have been identified within the research are multimodal digital writing as a process and as a product and the communicative experience that students have through the gradual development of their skills to write, read, speak and listen in specific communicative situations, that is, the interactional and the pragmatic are articulated in the intentional construction of discursive meanings with the digital text (Calle & Gómez, 2020). In this way, multimodal digital writing is projected as an essential element for a competent and autonomous management of textual production in the classroom, favoring the development of skills to create coherent and varied texts, with the use of tools such as situational or contextual representation, hypertext, virtuality and autonomous writing, strengthening their communicative skills and consolidating transversal learning.

Basically, this is a current and constantly growing line of research and innovation that has been nourished by experiences and advances in ICT (Góngora & Martínez, 2012), as well as the application of new discursive, linguistic and grammatical strategies, which add value to the communicative relationships established around the text. It is expected to lay the foundations for an interpretive and transformative model of writing practices in the classroom, relying on the application of digital information mediation strategies, which contribute to a higher level and frequency of textual production/comprehension by students.

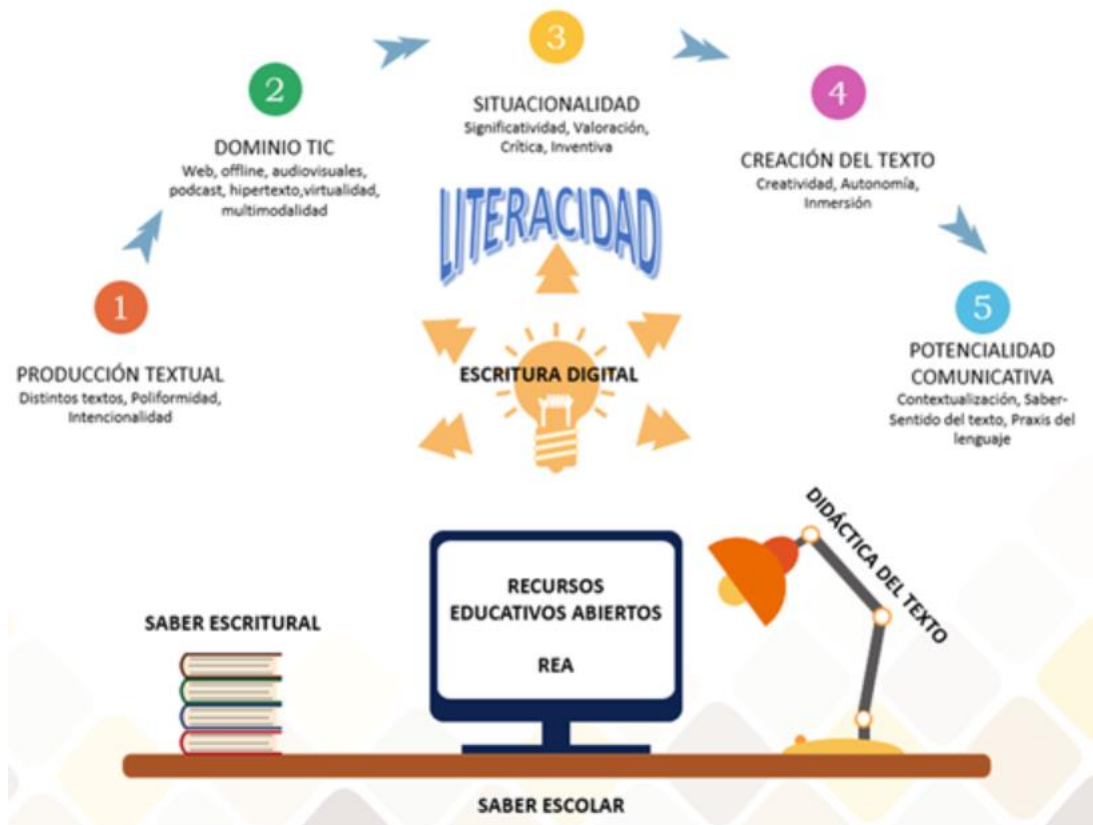
Thinking about a digital writing model implies thinking about written production as a textual form specially designed and produced for circulation in electronic media, the Internet and other sources of electronic communication, but when it is approached from the universe of possibilities opened up by virtuality (Bonilla & De Castro, 2021), multimodal digital writing is assumed with all the extent that a writing mode that integrates different channels, media and codes supposes for its preferential dissemination through digital environments, but also analogue ones.

This is where the consistent and planned use of technology to produce or achieve educational results or objectives allows multimedia with open resources, which are online/offline digital development media that can be easily accessed through electronic channels or technological devices, fostering the skills, capacities and aptitudes to carry out an efficient communicative

act in a given situation and with a specific purpose: to produce and understand the meaning of the written text.

Making this appropriation of multimodal digital writing possible implies the development of digital literacy (Byrnes & Wasik, 2009), that is, functional literacy in terms of technological and informational skills that allow the production, understanding and circulation of texts in virtual environments. Much of this responsibility in terms of digital literacy would fall on the school, since one of the main aims and objectives of education is knowledge in science and technology. Therefore, if this learning is required, even more so will digital literacy be required as a competent experience and communicative ability based on technological media. The following illustration outlines the multimodal digital writing model that results from the pedagogical articulation of the previously mentioned elements:

Figure 1. *Multimodal digital writing model*



Source: The author, 2024

Based on this multi-component model, it is highlighted that the interest of the research is essentially interpretative and evaluative of the relationships established between the participants from the written text and towards the meanings that they construct in their writing practice in digital scenarios (Kress, 2005). Therefore, the essential thing is to be able to delve into the experience, processes and meanings that the

subjects give to their communicative action in multimodal digital scenarios, which is achieved through a qualitative approach. In this regard, interactional sociolinguistics provides detailed and in-depth descriptions of the contexts of discursive verbal production and expression, taking into account the contextual elements, intentionality, adaptation and transformation of the communicative subjects and their linguistic constructions, thanks to which the achievements and difficulties that students present in the development of communicative skills can be interpreted and valued according to the degree of structuring that the texts present.

Through interactional sociolinguistic analysis and the theoretical multimodal digital writing foundation, the contexts for interpretation and transformative application of writing practices in the classroom are established, so that students' digital writing can be valued and projected towards communicative skills (Jewitt, 2008), obtaining a pedagogical and didactic model for strengthening textual production that makes use of learning strategies that combine technological, playful, creative and contextual resources in new literacies.

### Discussion

Based on the analysis of the research results and their comparison with previous studies, it can be stated that, in the case of the students' textual production in basic primary education, there are expressive difficulties, low linguistic learning and a low frequency of autonomous production in writing (Rose & Martin, 2012). The above is also connected with the fact that the learning of the language grammatical elements is quite limited, especially in what it has to do with their application for communicative purposes constructions, that is, the parts of the sentence, spelling, linking words, prepositions and conjunctions, among others, are not recognized and used efficiently. In this context, writing does not reach the point of meaning a difference in terms of communicative skills in specific environments, so that multimodality in textual production can provide adequate mechanisms for the motivation and writing practice, encouraging students to put their thoughts in writing, counting on digital resources that are stimulating and familiar to them in their daily lives.

The diagnosis built from the research contributions and their observational contrast, allows us to ensure that written language does not present advanced forms of appropriation and use in communicative situations (pragmatics), which is why they fail to efficiently apply statements, descriptions or arguments with sufficient coherence when contextualizing oral messages that require combining different communication approaches (interlocutors), despite the fact that they demonstrate skills to

establish frequent contacts through dialogue with their peers and with the teacher.

Regarding reading, there is a mid-level of reading skills and in literal, inferential and critical comprehension skills (Hagg, 2017). It can be observed and verified that they have difficulty in phonetics and silent reading. In the first, their pronunciation, intonation and management of pauses are not adequate, which is related to the frequency of reading practice in the classroom and outside. And in the second, deficiencies are perceived in discourse continuity when they read, so they tend to do it in short fragments and it is difficult for them to interpret the meaning or sense of a relatively long text.

In writing, there is no evidence of sufficient skills in the production of short texts that are coherent and allow for fluid written expression. In this regard, factors such as low stimulation or motivation to write in classroom situations or outside and problems in acquiring consistent writing practices, such as handwriting, the development of graphic organizers, the use of creative or imaginative writing, are identified. Instead, much emphasis is placed on dictation-copying in the notebook, which causes discouragement in them and resistance to its frequent practice.

The analysis of the situations listed above shows that, in general, students have grammatical, semantic, textual and contextual deficiencies for independent writing that can affect the possibility of constructing communicatively efficient digital texts, even though, by the second grade, in their language development process, they are able to show acceptable levels of comprehension of the texts read to them and respond to various situations described or narrated, fluently and with an adequate use of vocabulary in accordance with their level of communicative development. However, at the level of written production, the deficiencies are accentuated.

Consequently, the need for an autonomous digital writing pedagogical experience is questioned, using the variety of ICT resources and the students' communicative context, through which it is possible to advance in written production and the significant and competent appropriation of learning and communicative skills in the school environment and outside.

Taking this into consideration, if we consider that multimodal digital writing (Lankshear & Knobel, 2008b) brings together a wide variety of possibilities for competent and autonomous expression in textual production, integrating digital and analogue media, hypertextualization, hypermediation and interactivity, the purpose of strengthening digital communication skills and promoting the mastery of technological literacy from the initial levels of schooling makes perfect sense. Therefore, the learning experience that leads to competent textual production through multimodal digital writing implies a more open stance in pedagogical terms, with an innovative teaching practice and a greater capacity to translate

the transformation of learning scenarios into curricular terms.

It does not cease to make full sense here the search for a pedagogical orientation aimed at developing communication skills in virtual environments, with the use of digital tools and the disposition of all the varieties and capabilities of ICT to develop language, in all its forms, but which opens in a particularly creative and constructive way when it comes to writing.

This idea is considered essential to be able to affirm that the student's written creation and autonomy can lead to overcome the limits of conventional language and to the appropriation and transformation of communicative context; it is writing to learn and to deeply understand reality. In this perspective, Dawson's (2005) position on writing as an imaginative, creative and transformative act of the subject's autonomy is included, recognizing that in every act of writing not only the mastery of language is at risk, but also the ability to express one's own being.

These theoretical elements have a direct correspondence with the pedagogical postulates of Vygotsky (1995) on the sociocultural construction of written language and the pedagogy of writing found in authors such as Tolchinsky (1993), van Dijk (2000) and Cassany (2010), in addition to the central ideas of meaningful learning by Ausubel (2002), for whom writing, together with reading, allows the assimilation of knowledge and the construction of complex cognitive structures.

For its part, the theory of literacy (Jewitt and Kress, 2003) allows writing to be oriented towards digital multimodality, by recognizing that the use of ICT and the predominance of digital over analog in the act of writing is opening up a new space for learning, skills and communication needs for subjects.

In this sense, Chaverra and Bolívar (2016) understand multimodal writing as the set of semiotic resources that seek to communicate an idea through multiple modes of representation such as image, sound, gesture and symbol, while increasing the meanings expressed by the creative and empowering conjunction of the word in the digital environment.

And as Coronado (2021) points out, as virtual and digital scenarios become more established, individuals (in this case students) will have to develop more and more communication skills to integrate into these scenarios and be able to account for their thinking and language with the inclusion of different media, codes and representation systems.

In relation to this, Alegría (2020) proposes to investigate and analyze the importance of the use of ICT as an innovative methodology in the classroom, highlighting the way in which students can form knowledge and meaningful learning in a more dynamic and attractive way with digital educational materials and the need for further teachers training.

While Palacio et. al. (2018) argue that written language skills in primary school students are deficient, this is reflected in the assessments results applied at national and international level; in contrast, they highlight that ICTs have proven to be an effective tool for teaching and learning written language in primary grades, especially in regard to pragmatic elements.

All these elements coincide with the position of Esteban (2019), who developed a study to determine the relationship between the use of ICT and literacy in primary school students of an Educational Institution, through the processes of stimulation, appropriation and frequent use of written texts in different technological tools that are available to students.

And again, Chaverra and Bolívar (2016) focus on describing the effects that digital multimodal writing practices have on learning, and the digital formats that allow communicating, representing and interpreting knowledge in the texts produced by students, beyond conventional alphabetic writing, through multimodal text writing activities.

On the other hand, Cardozo (2018) focuses on the incorporation of ICT in the teaching-learning processes to improve reading and writing skills, through digital resources, which is understood as a clear confirmation of the importance that digital media have acquired in the development of a growing number of teaching strategies focused on learning communicative competencies and technological skills.

Likewise, Neva (2021) conducts a literature review on digital texts and reading comprehension in primary school, which demonstrates, on the one hand, the prevailing pedagogical interest in reading processes mediated by ICT and, on the other, the investigative and educational imbalance that may exist regarding the development of autonomous written production in conventional and virtual learning environments.

And finally, Colunga, Martínez and Vidal (2021) question whether digital writing is a possible challenge to achieve in children who are beginning literacy, establishing a broad contrast between the usual educational scenarios and the growing extra-classroom scenarios that are associated with the technological changes on which the information and communication society is based.

## CONCLUSIONS

Research on multimodal digital writing allows us to advance in the transformation of teaching and learning processes of textual production, as it provides intervention initiatives and practices that start from digital literacy and are projected onto the students communication skills.

From this perspective, digital literacy and the appropriation of technological skills place subjects in front of a broad scenario (the virtual) to build and consolidate textual production, counting on all the resources, strategies and mechanisms to come into contact with writing and reading.

It can be stated, in general, that multimodal digital writing allows for the strengthening of communicative skills for written expression in primary school students of a public educational institution, by having the pedagogical, technological, curricular design and operationalization elements of a textual production model that uses students' diversity, interest and communicative contextualization.

According to this, the following was achieved, specifically with this research:

- To identify the elements of multimodal digital writing that are related to the communicative skills of textual production, discourse comprehension and pragmatics.
- To characterize, from the pedagogical criteria of language, the development of multimodal digital writing applied to new scenarios of technological literacy.
- To compare the teaching-learning processes associated with multimodal digital writing and the use of ICT tools in the school setting.
- To analyze contributions and limitations of multimodal digital writing in the development of reading skills and its correspondence with oral and written expression in daily school activities.
- To formulate text production strategies, supported by multimodal digital writing tools and processes, which promote autonomy, diversity and the appropriation of communicative skills.

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