

# Digital Literacy: A Strategy for Leveraging Skills Development

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## Abstract

The main intention of this scientific article was to review the technical skills and social skills achieved with digital literacy in students of the San Isidro Rural Educational Institution in Santa Rosa de Osos, Antioquia, Colombia. It was sheltered under the theoretical postulates of Area, Gutiérrez and Vidal (2012), Cornachione (2006), Fonseca (2011), among other experts in the area that is developed; The study on digital literacy is framed in positivist thinking, since the variable was measured to compute derivations, then it was verified by descriptive statistics in which sequelae were compared with the assumptions and then, to outline the offer that aims to convert what is shown in the present article. The population of this study was eighty-two (82) individuals, including pedagogues and schoolchildren from the San Isidro Rural Educational Institution in Santa Rosa de Osos, Antioquia, Colombia. Specifically, the essence of the dissertation is that, once the corresponding digital literacy has been carried out in the students by the educational students, the progress of teaching skills is achieved through the diligence of actions using the Chamilo virtual medium, cognitive learning issues will be optimized, as well as educational progress in the educational entity.

**Keywords:** Digital literacy, Skills, Cognitive learning, Virtual environment.

## 1. Introduction

In the current times of the twenty-first century, inquiry is formed in an official way that individuals would be concerned to allow without limitations or prohibitions, however, this does not happen in that way and the origin is not that it is hidden or protected in a special place or that it concerns only and especially a small group as it happened in other times, but the restriction is in the way he adheres to it. Therefore, the necessary knowledge or skills are not taken into account to achieve the discernment that is achieved in cyberspace.

For this reason, what has been said before, it can be said that educational institutions are changed in the perfect context, to help the progress of information capacities that allow students to deploy positively in society and to be competent to investigate, choose, catalog within the entire set of

antecedents that is usable in the virtual space. those that are appropriate and that are appropriate to their research reflections (Herrera et al., 2022).

According to UNESCO's Media and Information Literacy (2014), information literacy enables democratic participation by providing access to exploration and critical understanding of cyberspace, while empowering people to become effective producers by using digital tools to publish research on the web as informational resources for others.

It should be noted that in Colombia, the Ministry of Information and Communication Technologies has implemented the "Vive Digital" transmission (2014), which aims to create training and assistance processes for communities to use Information and Communication Technologies through the establishment of techno-centers and training centers called "Puntos Vive Digital", which have opened their doors in a large number of municipalities and villages of the country, bringing technological tools to vulnerable social groups or those with limited economic resources and in them more than 100,000 individuals have been trained in digital literacy content.

However, as a result of the non-standardized observation procedures carried out by the researcher, indications such as the lack of technical competence among the students for the use of technical tools and the frequent use of computer programs were observed. They also lack experience in conducting online research that is relevant and appropriate for their academic assignments, and they tend to avoid using available resources to share their research results.

It is for this reason, and in relation to what has been proposed, that, in the San Isidro Educational Institution, Santa Rosa de Osos, Antioquia, an attempt is made to optimize the capacities of the students in relation to technical and social skills, obtaining that the students have a great interest in the work carried out in the technology space through the computer room. therefore, this strength must be taken advantage of to design a scheme that integrates, guides and suggests activities and new learning methodologies, through the integration of areas; leading us to the solution of the difficulty.

## **2. THEORETICAL BASIS**

According to Chávez (2012, p. 76), conceptual frameworks are bibliographic or baseline studies that briefly adjust the variables shown and the correlations between them, creating links to different theoretical areas that have been dealt with in previous consultations related to the same topic. In turn, the theoretical bases are the theories, concepts, characteristics, functions related to the object of research, which will allow the researcher to select the information.

### **2.1 DIGITAL LITERACY**

According to Gros and Contreras (2006, p. 76), "digital literacy is the expertise to execute valuable reflections informed about the research that is achieved online, which is equated to the art of the critical current, the key to make leveled estimates that differentiate between content and its manifestation, it contains skills such as reading and acuity in an efficient and non-

sequential hypertext environment; and discernment grounding skills as well as search practices, substantially grounded in research engines in cyberspace."

For Area, Gutiérrez and Vidal (2012), "digital literacy aims to give meaning and value the primordial notions and skills of computer science so that individuals can manage their technology in daily life and unfold social and economic events and congruences for themselves, their families and their societies". According to Ortoll and Collado (2007), it is related as "technological training conceived as discernment about what technology is, how it works, what it is for and how it can be used to achieve specific objectives and the learning of information conceived as the ability to recognize a need for information and know how to locate, evaluate, select, synthesize and use the inquiry effectively."

In contrast to the approaches presented by Gros and Contreras (2006), digital literacy can be defined as the ability to make informed judgments about online content. However, according to Area, Gutiérrez, and Vidal (2012), it is also characterized by the ability to evaluate fundamental computer concepts. Ortoll and Collado (2007) emphasize the importance of discernment with regard to technology, its functions, and objectives.

In this article, the theories proposed by Gros and Contreras (2006) are adopted, since they provide the most complete and precise definition of the variable under study. The authors state that digital literacy involves the skills needed to navigate and manipulate technology and information in cyberspace. Therefore, digital literacy can be understood as the ability to manage digital information and evaluate content found online to achieve a desired outcome. This preliminary understanding of digital literacy will allow for a more thorough exploration of the topic in future research.

### 2.1.1 TECHNICAL SKILLS ACHIEVED

On the other hand, to begin the development of the dimension according to Aguilar; Arroyo and Morante (2011) "these skills are computer skills, since they are handled uniformly in any environment, some of the skills derived from digital literacy are the use of browsers, multimedia exhibitions, word processors and spreadsheets".

On the other hand, Castellana (2015) points out that "these skills can be exchanged in the use of browsers, word processors, spreadsheets and presentations, which allow them to establish, maneuver and accumulate the necessary research in the classroom. Currently it is unavoidable to make use of these skills, it is necessary to be linked to the local network or the internet." For his part, for Malcolm (2012), "they are skills combined with the use of Information and Communication Technologies in order to find, evaluate, create and report information; are the cognitive skills that people use to use computers to store information, interpret what they find, and judge the quality of that information."

When comparing the different approaches, it was evident that Aguilar, Arroyo and Morante (2011) and Castellana (2015) have different perspectives on the technical skills acquired through digital literacy. Aguilar believes that these skills are applicable in both educational and professional settings, while Castellana highlights that they allow the creation, manipulation and storage of information. Malcolm (2012) associates technical skills with the use of ICTs.

After analyzing these perspectives, the researcher decided to adopt Castellana's (2015) point of view, as it provides a more precise and accurate account of the progress of this dimension. According to Castellana, technical skills are the result of digital literacy and are acquired by students.

It can be inferred that technical skills include the use of browsers, word processors, spreadsheets, and presentation programs, which allow both teachers and students to efficiently use technology and cyberspace. This improves the teaching-learning process and promotes creativity (Hernández-Sánchez et al., 2022).

#### 2.1.1.1 Use of browsers

For Vega (2014), "the use of browsers allows the documents provided by web servers to be conceived, the browsers interpret the HTML pages and expose them to the screen. In other words, the use of browsers is one of the skills achieved through digital literacy where it is allowed to adhere to web spaces."

Likewise, Pinto (2014) points out that "the use of browsers serves as an intermediary between the beneficiary and the elements they take into account in the database, providing an application that makes the passage to the data and the information compiled more efficient, faster and more secure. In other words, the use of browsers is essential for the student or pedagogical to be able to consent to the web for the direction of didactic content."

On the other hand, Vértice (2008) states that "the use of browsers are activities of computer programs that are used to locate and expose web pages to move around the Internet. Although that is their most common use, browsers can also be used to consent and view content on a local or private network."

When reviewing the criteria presented by Vega (2014), the use of browsers was identified as an application that enables access to the web. Similarly, Vertex (2008) describes browsers as software applications used to display web pages and understand how they work.

Considering these perspectives, Pinto's (2014) statement regarding the interaction between users and tools through browsers seems more relevant to the present study. Browser use is a digital literacy skill that allows users to access and navigate websites, as well as render documents. In the pedagogical field, this competence can serve as a valuable support material for the teaching-learning process.

#### 2.1.1.2 Use of word processors

It should be noted that Pinto (2014) points out that "the use of word processors is part of a computer package worldwide and provides functionalities, complying with the congregation to which they concern. Using them allows you to carry out tasks of editing and manifesting textual documents as easily and quickly as possible, efficiently and safely". Their use is very extensive and widespread, they have displaced the archaic typewriters because their possibilities of editing and exhibition are great.

For Vega (2014), "the use of word processors are computer applications, their use allows you to create, store, change, make and channel the instruments in a natural and fast way". For his part,

Castellana (2015) points out that "the use of word processors shows that their use is basically for writing documents, including tables, images, etc., and also for creating a web page".

In contrast to Pinto's (2014) view, which suggests that word processors primarily facilitate editing tasks, Vega (2014) argues that these tools also allow users to easily create and modify documents. Castellana (2015) further supports this idea, stating that word processors are mainly used for document transcription. However, this article aligns with Pinto's (2014) perspective, as he recognizes that word processors allow a variety of editing tasks to be performed simultaneously. This argument supports the use of word processors as an effective tool for document management and creation.

It is worth noting that the aforementioned concepts highlight the use of word processors as a digital literacy skill that allows for the efficient editing and modification of documents. This capability supports the improvement of teaching and learning processes by providing a simple and effective means of reviewing and updating content. By harnessing the potential of word processors, educators can ensure that their teaching materials remain relevant and engaging, thereby promoting better learning outcomes.

#### 2.1.1.3 Using spreadsheets

For Pinto (2014), "spreadsheets are annotated in tables, with rows and columns in which the data on which unequal operations are going to be carried out are implanted, their use allows the execution of additions, subtractions, multiplications, financial, statistical, contingency calculations, among others." On the other hand, Castellana (2015) points out that "the use of spreadsheets allows manipulating, calculating and analyzing sets of numerical data, their performance is very broad, from creating factors and controlling expenses, to making statistical dissertations".

For his part, for Vega (2014), "the use of spreadsheets allows the introduction of forms that look like tables where data and formulas are displayed; Each of the data and formulas is embedded in a cell that is the intersection between a row and a column." To make working with a spreadsheet easier, it is often placed with specialized functions that perform heterogeneous standard operations, such as the sum of a set of values, the average, and so on.

According to Pinto (2014), Castellana (2015) and Vega (2014), the use of spreadsheets allows the elaboration of additions, subtractions and other types of numerical data, he also says that it allows the administration of calculations and allows the entry of forms with the appearance of tables in order to carry out the requested work and that they serve the purpose for which they were intended.

He takes a position with Pinto (2014), where he suggests that the use of spreadsheets allows the execution of statistical procedures. Considering the above statements and ideas, it becomes evident that the use of spreadsheets is a technical skill that can be achieved through digital literacy. This capability allows users to perform a variety of operations such as addition, subtraction, multiplication, financial analysis, statistical analysis, and probability calculations, among others.

#### 2.1.1.4 Using Presentation Programs

For Pinto (2014), "the use of presentation programs expresses that they are computer procedures that allow interesting exhibitions to be instituted with ease and haste. Its use accesses the performance of slides that are displayed in sequential order." The slides corresponding to the pages can be viewed on a computer screen or projected and can contain text, images, colors, animations, etc.

According to Aguilar; Arroyo and Morante (2011), "the use of presentation programs establishes a series of slides that show how it is established and it contains images, videos, sound, text and animation effects". For his part, Castellana (2015) points out that "the use of presentation programs is used to design presentations, ideas, effects of an institution, as well as as support material in the execution of a project".

It should be noted that for Pinto (2014), Aguilar, Arroyo and Morante (2011) and Castellana (2015) the use of presentation programs are computer applications that, due to their use, allow the execution of slides which they expose in the order established by the individual and are used to promote ideas and achieve the execution of a work or project in record time.

Pinto's (2014) vision is confirmed in this research paper when he shows that the use of presentation software allows the preparation of slides. Based on the above, it has been mentioned that using presentation software is a digital skill that allows you to create slides that reflect ideas, institutional implications and serve as support documents in the class.

#### 2.1.2 SOCIAL SKILLS ACHIEVED

For Peñafiel and Serrano (2010), "the social skills achieved are directions and compilations of innate management, especially through learning; A conclusive variable in the instructional process is the interpersonal environment in which the child unfolds and learns; they have motor and manifest devices, enthusiastic or affectionate and cognitive, these are specific responses to concrete situations among the social skills achieved would be listening, participating, talking, convincing and negotiating".

Cornachione (2006) states that "the social skills achieved are a link of practices (behaviors, and emotions), which tolerate interpersonal relationships, feel good, get what you want and ensure that others do not hinder the achievement of objectives". It is the content of corresponding to other people in such a way that a great patronage and a small negative result are achieved, both in the short and long term.

On the other hand, Nuñez, Crespi and Angrehs (2011) point out that "social skills are a basic issue in the improvement of every human being. They consent to relate and interact successfully with their peers. That is why its progress is important, since it results conclusively in people's lives, as soon as it is exercised continuously, the individual is better deployed in the professional and personal spheres".

Facing the criterion of Peñafiel and Serrano (2010), Cornachione (2006) and Nuñez, Crespi and Angrehs (2011), the social skills achieved are behaviors and repertoires of behaviors acquired mainly through learning, they are a set of behaviors that access to improve interpersonal relationships and it is an essential issue in the progress of every human being in order to be related to social skills both in the professional and personal spheres.

For the purposes of the article in question, it is decided to take the theories emanated by Peñafiel and Serrano (2010), as it is considered more pertinent and concrete, taking into consideration the above stating that the social skills achieved are divided into knowing how to listen, participate, converse, convince and negotiate which allow development in the professional and personal sphere.

#### 2.1.2.1. Listening

For Peñafiel and Serrano (2010), "listening requires a will superior to that which is made when speaking and in addition to that exercised by listening without unraveling what is heard". Active listening involves both listening and understanding the message from the speaker's perspective. It includes the ability to not only understand the words spoken, but also the emotions, ideas, and beliefs that underlie the message. To truly understand someone, empathy is necessary, which means being able to see things from their point of view.

According to Soto (2013), "listening carefully is one of the most valued social skills in communication". The interlocutor is conveyed the idea that the message to be transferred is being picked up and that the person is capable of demonstrating and perceiving what the other person communicates. For Lacalle (2012), "listening is to carry out an attention, which manifests respect, tolerance, responsibility and appreciation of the other as a person".

Comparing the approaches according to Peñafiel and Serrano (2010), listening is a skill that refers to the comprehension and understanding of what is communicated from the point of view of the other, for his part Soto (2013) expresses that these are one of the most valued social skills and for Lacalle (2012) it means respecting, tolerate and value the opinion of the other subject.

Based on the theories presented by Peñafiel and Serrano (2010), the researcher takes a position since the authors provide the most precise and appropriate definitions for the development of this indicator. Therefore, it can be inferred that the ability to listen actively involves an individual's ability to appreciate, tolerate, and value the opinions or statements of others while identifying with them.

#### 2.1.2.2 Participate

According to Ibáñez (2008), "participating refers to the process of taking part and also to the relationships with other people that radiate this process". Aim for action and connection. Collaboration is "the social experience of living in the world from the point of view of incorporation into social communities". For his part, for Feito (2011), "it is the adoption of decisions with transcendence in the life of the centers". In the words of Saldivar (2008), it means that "the beneficiaries assume a certain responsibility and contribute their knowledge to ensure the effectiveness of a project, that they take ownership of it and have an interest in its success, which can result in a process of empowerment".

Comparing the definitions for Ibáñez (2008), participating refers to taking part in some things, while Feito (2011) indicates that it is the mere reception of information for decision-making and for Saldivar (2008) it means that people assume some responsibility for some action or decision.

For the purposes of this article, it is decided to take the theories presented by Ibañez (2008), since it can be mentioned that the ability to participate refers to the responsibility that an individual takes to make decisions or perform certain actions together with other people, assuming a certain responsibility in some action or decision in a process of empowerment.

#### 2.1.2.3 Converse

According to Gabilondo (2012), "conversation is even being willing to reformulate, rethink, critically form what the person is concerned with in order to deploy a critical, dynamic and emancipatory conception, it is to put one's own presuppositions into play". In the same way, for Fonseca (2011), "to converse is to talk with one or more people, it is to live, to live in company, it is to communicate and have friendship with one another". Similarly, according to Pujolas (2012), "to converse you not only have to speak, but you must listen carefully to what the person with whom you are talking is saying; it means living together, having frequent communication, having a relationship (with people or objects)".

Comparing the definitions presented above, it was possible to understand that for Gabilondo (2012), conversing refers to the ability to communicate respecting the opinion of the other person, while Fonseca (2006) indicates that it refers to talking to one or more people and according to Pujolas (2008) in order to converse it is necessary to listen carefully to what the other individual is saying.

Taking into consideration the definitions set out above, it was decided to choose the theories emanated by Gabilondo (2013), since he is considered the author who has the most accurate and appropriate approaches for the development of this indicator. Of the aforementioned it can be said that conversation is a skill where the individual is willing to listen attentively and politely to what is going to be exposed or expressed by the other person.

#### 2.1.2.4 Convincing

Describing this indicator, Urcola (2015) states that "convincing is the difficult art of getting someone to accept a proposal or change their mind through demonstrations and reasons that are quite exposed to the effect. To achieve this, it is decidedly necessary to know and assume a series of basic concepts and to master the rational devices that act in people's minds."

According to Erice (2010), "to convince is to put an idea in a person's head and heart and for him to make it his own, idea, head and heart". Breton (2009) comments that "convincing, that is, proposing to others that they share the opinion that is put to them, is an activity that is fully deployed in democracy".

The authors above could understand that for Urcola (2015), convincing is a skill where the individual gets another person to accept a proposition, for his part Erice (2010) indicates that this is achieved when an idea or thought is put in another person's head and for Breton (2009) to achieve it it must "propose to others that they share the opinion that is presented to them".

For the purposes of the development of this article, it is decided to take the theories presented by Urcola (2015), since he is considered the author who has the most accurate and concrete axiom



for the development of this indicator. From the above, the researcher can infer that convincing is a skill that refers to the art of getting another person to accept a position, opinion or idea.

#### 2.1.2.5 Negotiate

In Lacalle's (2012) opinion, "negotiation is the way to resolve conflicts between two or more parties". It is deployed in continuous phases of action, in which the parties try to find solutions to a conflict considering the following issues: conflict and agreement exist concurrently, both parties have the capacity to vary the terms and resources are scarce.

In the words of Urcola (2010), "negotiation is a matter in which two or more parties, with concerns that are both frequent and in conflict, meet to show and discuss explicit proposals aimed at reaching an agreement". According to Lechuga (2005), negotiating is talking to one person or others, to solve something or manage it. Negotiating is a process through which two or more people are able to reach an agreement favorable to both parties.

Reviewing the statements presented in Lacalle's (2012) criteria, negotiation is a skill related to conflict resolution, while Urcola (2010) indicates that it is a process where two or more people seek a solution to a problem and for Lechuga (2005) negotiating is talking to one person with another or others, to solve something or manage it.

However, when deciding as a researcher, the approaches mentioned by Lacalle (2012) were taken into consideration, as they considered the most pertinent in this case. From the above, it can be said that negotiating is a skill that allows people to meet or discuss a problem and achieve a solution to it where all parties involved are satisfied.

### 3. Study Methodology

To carry out the inquiry process, it is unavoidable to visibly show what the techniques, skills and means to follow for the development of the same will be, in other words Hurtado (2012) defines it as "the general planning of the research process". Considering the nature of research, it is defined as positivist, in this sense Chávez (2012, p. 33), states that "this positivist approach pursues an orientation aimed at the practical-experimental procedure. He maintains that externally the human being does not live in an objective and social context."

The study on digital literacy is framed in the positivist approach, since it will measure the variables to calculate consequences, then it will be verified through periodicity statistics where derivations will be compared with the ventured theories and then, plan a proposition that is situated to transfigure what is shown in the study. Only that prodigy that can be measured, approved and thus be able to obtain confidential results is accepted as a science.

However, the basic intentions of the quantitative paradigm in scientific research consist, according to Palella and Martins (2007), in ennobling data as the fundamental essence of its argument. The datum is the concrete expression that symbolizes a reality. Therefore, everything must be carried in numbers, in the statistical data that brings the phenomenon closer.

In other words, it consists of making measurements, accurate forecasts of the regular behavior of social groups. Likewise, it allows data to be harvested to design models or preconceived theories. The representation of quantitative research emphasizes the external, that is, the valid or external, possible for observation. It should be noted that the study population is defined by Tamayo and Tamayo (2012), it is "the set of the phenomenon to be learned, where the analysis connectors have a common particularity, which is studied and gives rise to the data of the inquiry".

For this article, the population was made up of eighty-two (82) subjects, including pedagogical and schoolchildren of the institution object of this article, from which they are randomly separated, favoring of course that it is not intended to bias or permeate the opinions of the interviewees.

TABLE N°1 POPULATION DISTRIBUTION

Educational Institution	Teachers	Students
San Isidro de Santa Rosa de Osos	14	68
TOTAL SUBJECTS	82	

Source: Niebla (2022)

The population was finite and affordable, in terms of sampling forms, therefore, the population census was awarded, which, according to the discernment of Sabino (2008), "recommends the use of the population census when it comes to small populations". That is why Hernández, et al. (2014), assert that in the population census, all cases (people, animals, plants, objects) of the universe or the learned population are surrounded.

In support of the methodology argument, Hernández et al. (2014) propose that in order to carry out scientific research it is necessary to follow certain procedures to collect information or validate the knowledge acquired. The authors classify these procedures into two categories: documentary techniques and field techniques. Documentary techniques belong to the process of obtaining and organizing information, while field techniques involve the direct collection and compilation of data at the site where the phenomenon occurs. The latter is further subdivided into surveys and observations.

On the other hand, Bernal (2008) states that "by reason of the technique or forms used, individually, the background or research requested can be achieved to give replications expressed in the research, in communication with the objectives of the proposed research design", which was instituted within the non-experimental sketch.

Similarly, according to cit. a (2008), background gathering requires the use of different methods or techniques. In line with this, it is important to highlight that the preferred technique for data collection in this research was observation through self-directed inquiry. Based on the findings, this method was considered more effective for analyzing the basic actions and processes being studied.

Regarding instruments, Bernal (2008) narrates them as "any resource, mechanism or conformation (on paper or digital), which is used to obtain, inspect or accumulate information". They are associated with the field technique chosen to collect the information. Surveys involve

the use of questionnaires, interviews, attitude scales, writing tests, and objective tests. As for observation, it can be classified as external or non-participant, or internal or participant.

According to Bisquerra (2009), the survey technique is useful for knowing the attitudes, opinions and motivations of the subjects related to the object of the research. This technique is implemented through forms or questionnaires that are designed to address research questions and analyze documentary sources.

Chávez (2012) defines a questionnaire as a set of questions presented in a clear and concise manner that refer to the relevant facts or aspects of the research. The questionnaire consists of questions related to one or more variables and can be open or closed. The answer options are determined by the researcher and, in some cases, there may be only two options (dichotomous) or several, depending on the complexity of the research.

Palella and Martins (2007) classify outcome techniques according to the research approach, citing Hernández et al. (2014). The quantitative paradigm, they explain, involves the collection and analysis of data using numerical techniques of measurement, counting, and statistics, in order to establish standards of accuracy for the population.

In the present research, descriptive statistical techniques were used to analyze the data collected. This included the distribution of frequencies and the categorization of visible values according to the numerical dimension of the study variables. The arithmetic means or averages were calculated using Excel version 10, based on the descriptive method, to better understand the objectives of the research.

#### **4. Analysis and Discussion of the Results**

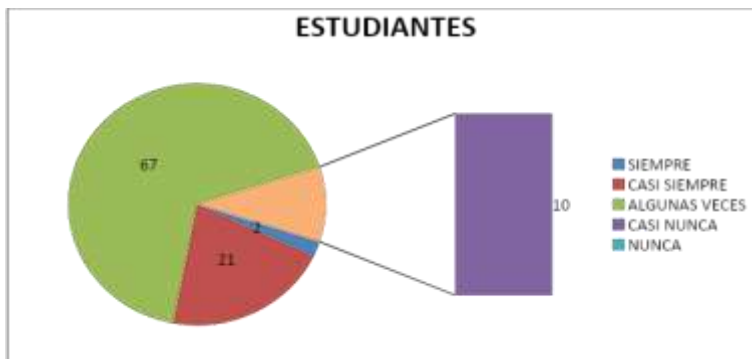
This section presents the descriptive statistics that show the distribution of frequencies and percentages of the sample composed of fourteen (14) members of the pedagogical staff and sixty-eight (68) students of the Institution worked on in this work. The results were analyzed by discussing the responses obtained from the research instruments. The derived tables are organized according to the indicators and their relevant dimensions, which are then presented with associated data that reflect the variables related to the objectives of the study. These results are discussed in comparison with the authors who support the theoretical framework of this research article.

Table 1. Technical skills

Indicador	Siempre		Casi Siempre		Algunas Veces		Casi Nunca		Nunca		Media	
	Estudiante		Docente		Estudiante		Docente		Estudiante		Est.	Doc.
	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr		
Uso de Navegadores	15	22%	0	2%	25	37%	3	21%	19	28%	9	67%
Uso de procesadores de texto	11	16%	1	10%	20	29%	4	29%	27	40%	8	57%
Uso de hojas de calculo	4	6%	5	33%	21	30%	3	19%	29	42%	4	31%
Uso de programas de presentaciones	23	34%	1	10%	19	28%	5	36%	21	30%	7	50%

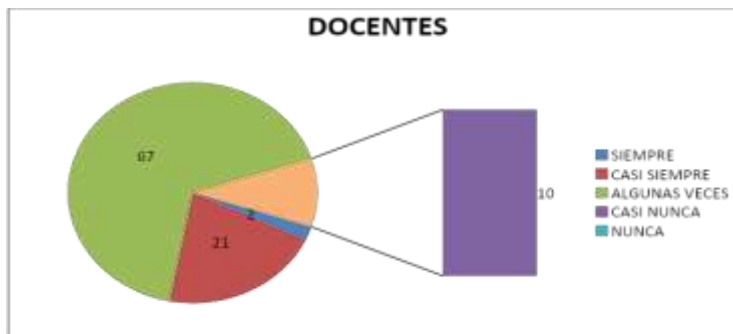
Source: Niebla (2022)

Figure 1. Use of browsers



Source: Niebla (2022)

Figure 2. Use of browsers



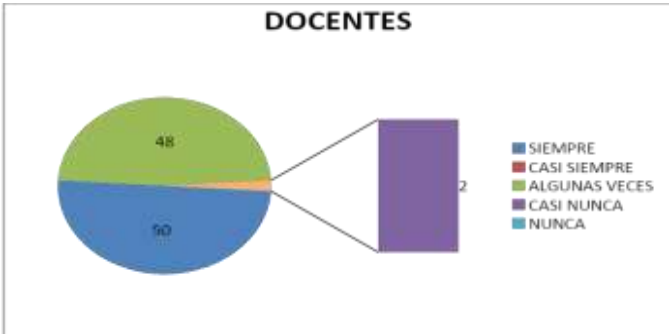
Source: Niebla (2022)

Figure 3. Use of word processors



Source: Niebla (2022)

Figure 4. Use of word processors



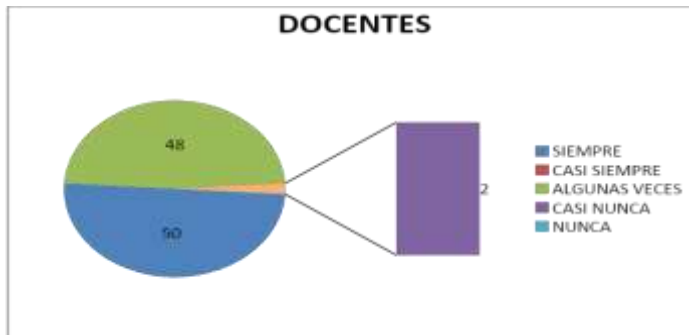
Source: Niebla (2022)

Figure 5. Using spreadsheets



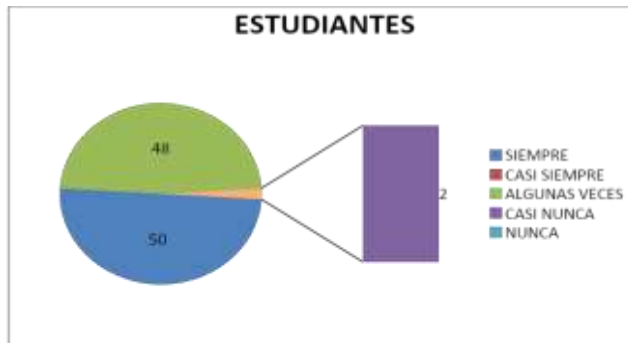
Source: Niebla (2022)

Figure 6. Using Sheets



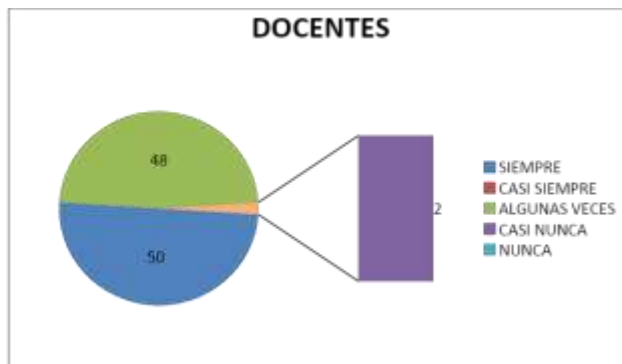
Source: Niebla (2022)

Figure 7. Using Presentation Programs



Source: Niebla (2022)

Figure 8. Using Presentation Programs



Source: Niebla (2022)

Table 1 presents the correlation between technical skills and browser use, specifically examining whether students and teachers use browsers to complete assigned tasks and search for information, as well as whether necessary resources are available within the classroom.

In this regard, 22% of the students considered that it is always used, another 37% said that it is almost always, while 28% said that sometimes and 11% almost never while 2% never. On the other hand, 2% of the teachers stated that they always tended to the option, 21% almost always, while 67% considered that sometimes they express themselves and another 10% almost never, never registering opinions for the option.

According to the arithmetic means, students scored 3.64 and teachers scored 3.17 on the scale determined for browser use, indicating that students use browsers frequently while teachers use them moderately. These results are consistent with Vega's (2014) findings, which state that browser use is a digital literacy skill that allows users to access and interpret documents on web servers and connect to websites on the Internet. Frequency distributions for both students and teachers also support these results.

Regarding the indicator use of word processors, which reviews whether word processors are used to constitute the procedures to be carried out, 16% of the students reflected that they are always used, while 29% opted for the option almost always and 40% sometimes, another group represented by 12% almost never and 3% never.

In the case of the opinion of the didactics, it was recognized that 10% judged that they are always used, 29% almost always and another 57% of the didactics reflect that they are sometimes used, while 5% meditate that they are almost never used. As for the arithmetic means, these projected results of 3.43 for both the students, as well as for the didactics, placing them in the "moderately frequent" category.

These reflections are in line with Vega's (2014) statement that computer applications for word processing allow the creation, modification, formatting, and processing of documents in a simple and fast way. Similarly, Castellana (2015) notes that word processors are primarily used to write documents, including tables and images, and to create web pages.

In these thoughts, for the indicator use of spreadsheets to constitute the primary instructions, as well as to establish their grades, in the opinion of 6% of the students are always used, 30% said almost always and another 42% sometimes, while 14% almost never and 7% never. On the other hand, 33% of teachers considered that they are always used, 19% almost always and another 31% sometimes and another 7% almost never and never 10%. The results through the arithmetic means, it is possible to consider that in the case of the students, a mean of 3.15 and 3.60 was recorded for the group of teachers, placing it in the category of moderately frequent for students and "frequent" for educational students.

The information provided moderately agrees with Pinto (2014), who states that spreadsheets reside in tables, with rows and columns in which the data on which unequal operations are going to be carried out are implanted, their use allows the elaboration of additions, subtractions, multiplications, financial, statistical, and possibility calculations, among others. Likewise, his practice allows the visualization of data through various graphs that can accommodate various

formats of style, size and color, which provide the representation and knowledge of the global analysis of the data.

For the indicator use of presentation programs, in relation to whether videos are used as a way to display the academic understandings, as well as if Power point presentations are used to carry out their school obligations, in the opinion of the students, 34% consider that they are always used, another 28% almost always, while 30% thought that they are sometimes used, and 6% and 1% almost never and never respectively. On the other hand, teachers estimate that 10% always use them, another 36% almost always, while 50% said that sometimes and 5% almost never.

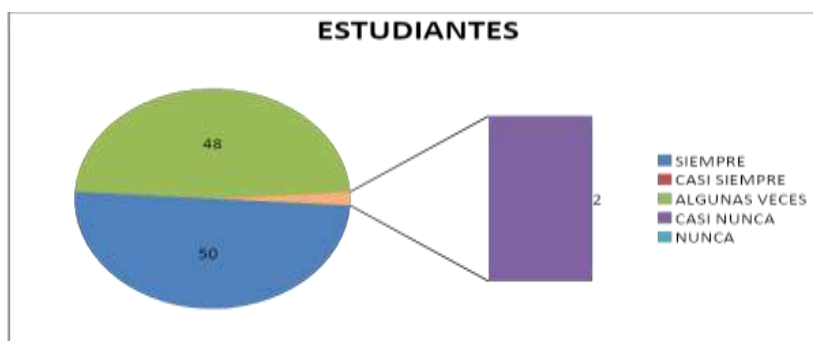
The average score of the indicator for both students and teachers was 3.81 and 3.50, respectively, placing them in the category of "frequent". These results are aligned with the approach proposed by Arroyo and Morante (2011), who suggest that the use of presentations allows the creation of sets of slides that can include text, images, videos, sound, and animation effects to convey ideas, proposals, or commitments of an institution. Castellana (2015) also interprets that these tools can be used as support material for the realization of work or projects.

Table 2. Interpersonal skills

Indicador	Siempre				Casi Siempre				Algunas Veces				Casi Nunca				Nunca				Media	
	Estudiante		Docente		Estudiante		Docente		Estudiante		Docente		Estudiante		Docente		Estudiante		Docente		Doc.	Dir.
	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr	Fa	Fr		
Escuchar	7	10%	4	31%	18	24%	3	21%	29	44%	5	33%	10	15%	1	5%	5	7,35%	1	9,52%	3,16	3,60
Participar	7	10%	3	21%	31	45%	6	40%	21	31%	3	21%	7	10%	1	10%	2	2,94%	1	7,14%	3,50	3,60
Convenir	21	31%	5	39%	20	31%	3	20%	16	25%	3	22%	6	10%	2	12%	2	3,05%	1	7,32%	3,63	3,36
Convincer	17	25%	1	7%	16	23%	3	19%	27	40%	10	71%	6	9%	0	2%	2	2,94%	0	0,00%	3,54	3,31
Negociar	22	32%	7	52%	23	34%	0	0%	14	21%	7	48%	4	6%	0	2%	5	6,86%	0	0,00%	3,82	3,66
Promedio de la Media aritmética																					3,46	3,46

Source: Niebla (2022)

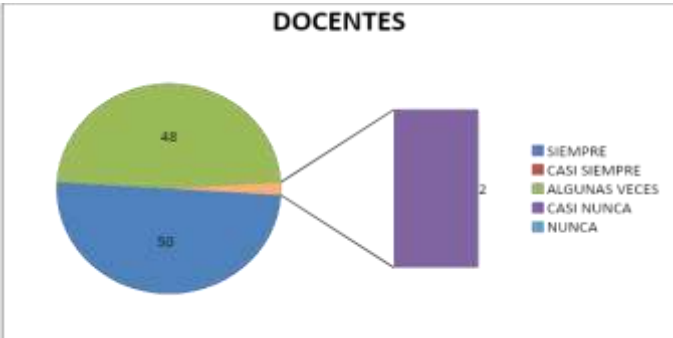
Figure 9. Listen



Source: Niebla (2022)

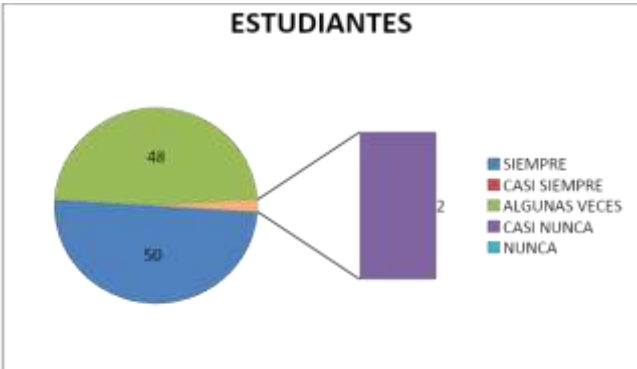


Figure 10. Listen



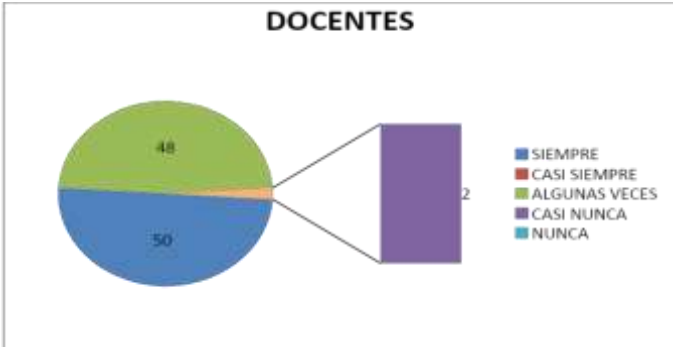
Source: Niebla (2022)

Figure 11. Participate



Source: Niebla (2022)

Figure 12. Participate



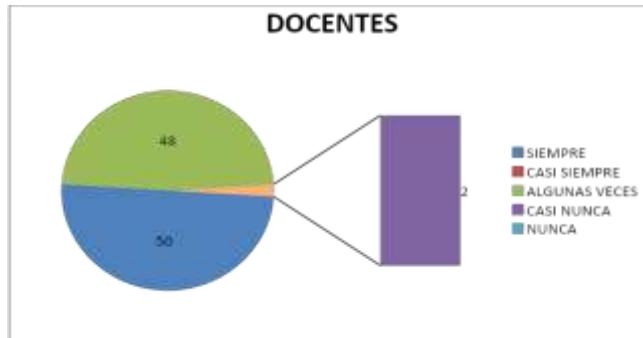
Source: Niebla (2022)

Figure 13. Converse



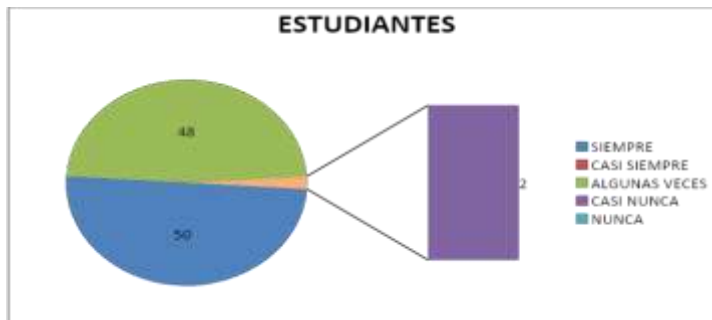
Source: Niebla (2022)

Figure 14. Converse



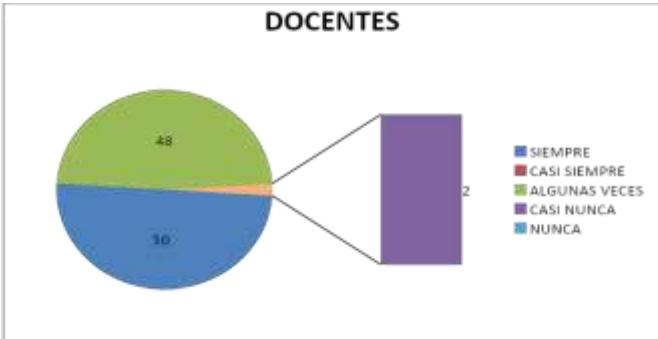
Source: Niebla (2022)

Figure 15. Convince



Source: Niebla (2022)

Figure 16. Convince



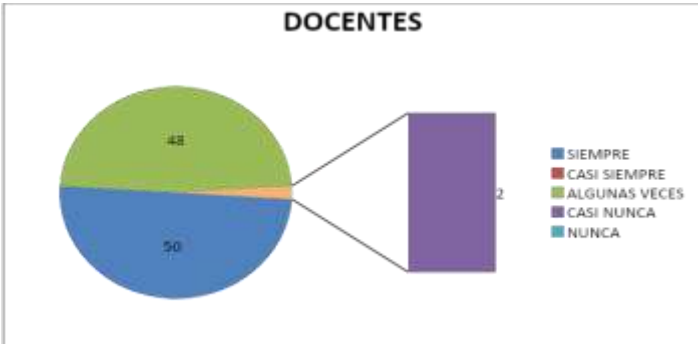
Source: Niebla (2022)

Figure 17. Negotiate



Source: Niebla (2022)

Figure 18. Negotiate



Source: Niebla (2022)

Table 2, corresponding to Social skills in correspondence to the listening indicator, relates to whether the didactics actively listen to the information given to them by their students, and reflect that their students display active listening within the classroom. In this regard, 10% of students say that they always listen to students, another 247% said that they almost always, while 33% said that sometimes and 15% almost never while 7% never.

Likewise, 31% of the teachers stated that they always tended to the option, 21% almost always, while 33% considered that sometimes they manifest themselves and another 5% almost never, and 10% never. Likewise, the arithmetic averages for students were placed with a value of 3.16 and for didactics with 3.60, placing them in the category "moderately frequent" for students and "frequent" for pedagogical students.

The results are consistent with the perspective presented by Peñafiel and Serrano (2010), who suggest that listening requires more effort than speaking, particularly when listening without understanding what is being said. Active listening, on the other hand, involves listening to and understanding the message from the speaker's point of view. It involves the ability to not only hear the words being spoken, but also the emotions, concepts, or thoughts that underlie the message. Understanding another person also requires a degree of empathy, which involves being able to put yourself in the other person's shoes.

Next, the participant indicator is presented, related to whether the intervention is reflected as a mechanism of interest within interpersonal relationships and if it favors the intervention as a stimulation skill in their students, 10% of the students stated that collaboration is always considered and cooperation is motivated, while 45% opted for the option almost always and 31% sometimes. another group represented by 10% almost never and 3% never.

On the other hand, 21% of teachers considered that participation is always manifested, 40% almost always and another 21% of teachers consider that they are sometimes used, while 10% consider that they are almost never used. The results were 3.50 for students and an average of 3.60 in the didactic population, placing them in the "frequent" category.

According to the reflections of Ibáñez (2008), participation is part of a thing. Participation is the social experience of living in the world from the point of view of affiliation to social communities. In this way, both pedagogical and students warn by the simple fact of attending classes. It relates to the mediation of collegiate bodies in which the three basic levels that have a school community can be expressed: teachers, parents and students.

Next, the indicator *conversar* is presented, which promotes communication channels to optimize interpersonal relationships, and if it favors within the institution to improve communication through periodic talks, recognizing that 31% of the students considered that communication is always favored, while another 31% judged that almost always and another 25% sometimes, while 10% almost never and 3% never.

In the case of educational workers, 39% of them consider that they are always helped, 20% almost always and another 22% sometimes and another 12% almost never and never 7%. According to the results of the results, it can be seen that in the case of the students, an average

of 3.63 was recognized and a 3.36 for the teacher group, it was categorized as "frequent" in the case of the students "moderately frequent" for the didactic ones.

These results coincide with Gabilondo (2012), for whom to converse is to be prepared even to reformulate, rethink, critically form what the individual thinks in order to deploy a critical, dynamic and emancipatory conception, it is to put one's own presuppositions into play. It is to be competent to question those who want to know. Not a single focus of intensity and meaning.

The evaluation of the "convince" indicator aimed to determine whether the institution under study presents a set of ideas to be approved as a whole and if it tries to persuade its students of the importance of its message. According to the records of the data collected, 25% of the students surveyed considered that the generation of ideas and practices of logic of conviction are always promoted, on the other hand another 23% thought that almost always, 40% sometimes, 9% almost never and 3% never. On the other hand, teachers estimate that 7% always use them, another 19% almost always, while 71% said that sometimes and 2% almost never.

The results projected values of 3.54 and 3.31 for students and pedagogical students proportionally, both were placed in the "frequent" category, all of which is related to Urcola (2015), who points out that "convincing is an action of complications to get someone to accept an offer or change their mind through demonstrations and sufficient reasons presented to this effect. To convince is to get one or more individuals to change their criteria or opinion through effective reasons. To achieve this, it is definitely unavoidable to be aware of and to claim a series of basic notions and to master the well-founded mechanisms that are conducted in the minds of individuals."

The negotiate, which calculated whether the institution originates the intervention permanently in meetings to reach successful agreements within the institution and the inquiry to solve problems in a calm way to avoid unpleasant contexts within the campus, 32% of the students said that promotion actions are always observed, while 23% consider that almost always, 21% sometimes, and another 6% and 7% almost never and never. On the other hand, teachers estimate that 50% observe that they are always promoted, another 48% sometimes and 2% almost never.

The results showed values of 3.82 and 3.38 for students and pedagogical students proportionally, both were placed in the "frequent" category, all of which is in line with Lacalle's (2012) project, which states that "negotiating is the process of conflict resolution between two or more parties". It is deployed in successive periods of action, in which the parties intend to provide solutions to a problem considering the following issues: conflict and agreement exist synchronously, both parties have room to vary the terms and resources are scarce.

In the words of Urcola (2010), "negotiation is a process in which two or more parties, both common and in difficulty, meet to show and contest explicit proposals aimed at reaching an agreement. Contracting is a means, never an end, for which the parties try to get as close as possible to the desired goal, using the appropriate strategies and tactics."

## 5. FINAL THOUGHTS AND RECOMMENDATIONS

The objective of this article was to describe the level of technical competencies in digital literacy achieved by students of the San Isidro Rural Educational Institution, located in Antioquia, Colombia. Based on the results obtained, it can be concluded that these skills are highly competent, with a frequent use of Internet browsers, word processors, spreadsheets and presentation programs to carry out academic tasks in the institution.

It is recommended that in terms of the technical skills present in the institution under study and taking into account the results obtained from the perspectives of students and teachers, it is recommended to design programs to develop competencies aimed at strengthening the use of tools such as word processors and applications to support presentations in the classroom. as well as to increase its use by students in order to reach the highest level in terms of its use.

Based on the results obtained, it can be concluded that students of the institution under study have commonly achieved social skills through digital literacy. These social skills are developed through learning and involve the use of emotional, affective, and cognitive mechanisms such as listening, participating, conversing, convincing, and negotiating.

It is recommended in terms of social skills and in response to the conclusions obtained, it is recommended to carry out competency development programs to strengthen social skills aimed at consolidating communication, argumentation to favor the solution of problems in the classroom and optimize interpersonal relationships in order to consolidate these skills.

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