Digital Competence And Cooperative Learning In High School Students

Johnny Félix Farfán Pimentel[1*], Raúl Delgado Arenas[2], Diana Eulogia Farfán Pimentel[3], Nilda Shirley Delgado Corazao[4], Consuelo del Pilar Clemente Castillo[5], Rino Nicanor Sotomayor Ruiz[6]

[1*]Universidad César Vallejo. Lima, Perú, felix13200@hotmail.com
[2]Universidad César Vallejo. Lima, Perú, rdelgadoa@ucv.edu.pe
[3]Universidad César Vallejo. Lima, Perú, diana75_farfan@hotmail
[4]Universidad César Vallejo. Lima, Perú, nidelgadocor2509@gmail.com
[5]Universidad César Vallejo. Lima, Perú, cclemente@ucv.edu.pe
[6]Universidad Nacional Agraria la Molina, Perú, rino@lamolina.edu.pe

ARTICLE INFO	ABSTRACT
	The aim of the study was to determine the intrinsic relationship between constructs such as digital competence and cooperative learning. In order to achieve this goal, a basic non-experimental and correlational design methodology was chosen, with the purpose of examining the connections and patterns of association between these two constructs. The data collection instrument adopted was a questionnaire applied to a representative sample of 215 high school students at an educational institution in Lima. The findings highlight that, in relation to digital competence, 60.0% of the participants demonstrated a "good" level, while 39.5% were at the "fair" level. Regarding cooperative learning, 89.3% of students exhibited a "good" level, and 10.7% were at the "regular" level. The results indicate that there is a positive and significant association between cooperative learning and digital competence, suggesting that a higher level of digital competence is related to an improvement in the level of cooperative learning of students. Highlighting the importance of promoting digital competence as a contributing factor to the development of cooperative learning in secondary school students. Thus, the study offers a breakthrough in the understanding of how these two interconnected educational variables can act synergistically to promote the integral development of students in the context of secondary education.

Keywords: Digital Competence, Cooperative Learning, Learning Skills, Basic Education

Abstract
The objective of the study was to determine the intrinsic relationship between constructs such as digital competence and cooperative learning. In order to achieve this goal, a non-experimental and correlational design methodology of a basic nature was chosen, with the purpose of examining the connections and patterns of association between these two constructs. The data collection instrument adopted was a questionnaire applied to a representative sample of 215 high school students in an educational institution in Lima. The findings highlight that, in relation to digital competence, 60.0% of the participants demonstrated a "good" level, while 39.5% were at the "fair" level. Regarding cooperative learning, 89.3% of the students showed a "good" level, and 10.7% were at the "fair" level. The results indicate that there is a positive and significant association between cooperative learning and digital competence, suggesting that a higher level of digital competence is related to an improvement in the students' level of cooperative learning. Highlighting the importance of promoting digital competence as a factor that can contribute to the development of cooperative learning in high school students. Thus, the study offers an advance in the understanding of how these two interconnected educational variables can act synergistically to foster the integral development of students in the context of secondary education.

Introduction

The technological advances that have an impact on society have generated essential changes whose implication has transcended into new ways of carrying out the various activities in social work; that is why digital skills enable the transformation of the socio-educational context based on innovation, creativity and entrepreneurship (Sierralta, 2023).

Digital competence is a determining factor in the learning process of students and makes it possible to access knowledge in a dynamic way through technological tools that affect students' learning achievement (Cervantes & Balladares, 2021).

It is emphasized that digital competencies imply a change in the didactic structure of the way in which teaching practice is carried out in a world in which technology is present in all human activities and substantially in the educational field; likewise, the educational community is immersed in a dizzying technological development and that teachers must take on the challenge of constantly updating themselves to exercise optimal teaching performance (Grandez, 2021).

In this regard, digital skills are important to be able to develop in different areas; since the acquisition of skills connotes the implementation of a set of resources for the resolution of problematic situations in the social context while optimizing the construction of knowledge in all its stages of the learning process in people (Laureano, 2021).

According to studies, digital competence is decisive for the teaching and learning process, given that through the use of digital resources it enables a dynamic way in the acquisition of knowledge in an organized way and a motivating effect on students; therefore, incorporation requires a training process that concerns not only students but also educators (Mera, 2021).

Likewise, cooperative learning aims at the development of learning mediated through dynamic forms of didactic team activities in which the interaction between peers whose roles are well defined stands out; Likewise, a set of essential values for life is promoted, contributing to the strengthening of communication skills, inclusion and attention to the diversity of students (Hidalgo, 2023). That is why cooperative learning as an integrative didactic strategy requires a joint, harmonious and motivating work that supports the achievement of educational objectives and thus enhances the capacities of students (Paredes & Ramos, 2020). Therefore, after the analysis, the following question arises: What is the relationship between digital competence and cooperative learning in secondary school students? This leads us to propose as an objective to determine the relationship between digital competence and cooperative learning in secondary school students.

Theoretical framework

Digital skills

Digital skills are one of the main courses in terms of student training and the efforts that must be made to integrate them into the learning process of learners; This is decisive for the achievement of educational objectives as it involves the main actors in education (Ocaña et al., 2019). In the same way, the needs and demands of new ways of learning and perceiving reality are based on digital competencies that must be responsibly oriented in information towards the educational community (Soto, 2023).

In this sense, the unprecedented changes that are currently being experienced at the level of knowledge management make it imperative to develop digital skills, since with the advent of new and powerful artificial language structures, the need for current education to be transformed in such a way that it responds to the demands of a world that is increasingly accentuated in the domains of current technology (Saavedra, 2015).

Similarly, in the field of education, teachers must develop digital skills because of the impact they have on the teaching and learning process; In this sense, the use of technology is a positive factor that contributes to the achievement of educational objectives to facilitate student learning, generating a motivating climate (Ocaña et al., 2020). In this sense, the digital competencies and didactic strategies used in teaching practice allow the strengthening of student learning in a significant way (Tapia, 2021).

Likewise, the importance of the use of learning technology is an essential element, constituting an intrinsic part of teaching practice and optimally impacting students' learning (Mykhnenko, 2016). In this way, the use of technology is effective and its impact is transcendental in the educational field and has a direct impact on the facilitation of learning (Englund et al., 2016).

For this reason, the ways in which teaching practice is carried out with the support of technological resources have a significant relevance in students' learning experiences (Kirwood & Price, 2013). Likewise, facilitation in the teaching and learning process is strengthened through the application of learning technologies such as virtual environments (Steils et al., 2014).

According to the 2015 OECD report, it indicates that students' digital skills and virtual learning environments are not directly related and concludes that the teaching factor is what will have an impact on the contextual environment compared to technological resources (Area, 2016). In addition, there is evidence of the limited capacity of people to obtain a greater optimization of the use of digital technologies (Gorghiu et al., 2018). That

is why digital competencies have a direct implication in the development of skills and abilities in students (Espinosa et al., 2018).

In the educational context, digital skills are becoming more and more intense due to the process of developing new artificial languages; so much so that, every time a new technology appears, it surpasses the previous one (Saana, 2019). Thus, the rapid advance of technology allows us to reflect that constant preparation is essential to be able to face the changes experienced in the knowledge and information society (Picatoste et al., 2018). Consequently, a special connotation is attributed to the attitude of teachers in the incorporation of technological resources in the educational process with vigor and motivation towards students (Cabero, 2020). According to experts in the field of technologies, they point out the urgent need to incorporate digital skills in order to access countless possibilities in the different areas of human knowledge (Williamson et al., 2019). Therefore, at the level of social, political, economic and educational development of countries, it is necessary to take a new look at the forms of organization, requiring people with a wide variety of skills, among which digital competence stands out (Marín et al., 2013).

Consequently, the incessant rise of knowledge technologies and their impact on the various areas of human events requires teachers to have an appropriate level of digital literacy that enables an effective contribution to the training process of learners (Guillén et al., 2020). In this context, teachers have a leading role as agents of change in an increasingly demanding reality (Prendes et al., 2018); while learners are the key player in the transformation process in an increasingly demanding digital environment (Adeltimirin, 2019).

It is important to provide guidance to society on the development of digital skills with a commitment to social responsibility, motivating people to seek autonomous learning using digital tools to expand their knowledge (Torres & Herrero, 2016). In this path of ideas, digital skills are essential for an optimal training process for learners (Calatayud et al., 2018).

Cooperative learning

The learning process requires the care and dedication of the students who learn through a cooperative mechanism in which everyone contributes, contributing ideas and interacting to achieve the established objectives (Pinedo, 2017). Thus, the cooperative learning methodology is oriented to the activation of capacities in the student with the purpose of favoring interaction between the participants of the team, developing cooperative competencies and attitudes (Estébanez & Fernández, 2015).

In this sense, learning is a factor that is present during all stages of maturation in human existence and is the basis for the development of new domains of knowledge, for which it must be significant (Ballester, 2002). Likewise, learning is a process of permanent change from a behavioral perspective as a product of experiential processes (Heredia & Sánchez, 2013).

Cooperative learning is a pedagogical strategy that encourages students to act in a relevant way and establishes objectives that will have to be achieved as long as they work as a team in a harmonious way for the consolidation of knowledge and the construction of new knowledge (Carbajal, 2017). For this reason, the school must employ strategies that favor the formative process of the student and build relationships between peers through cooperative groups in the classroom (Lara, 2005).

Cooperative learning is a way of organizing in small teams of students whose function is reciprocal interaction and has as its purpose the achievement of learning of each and every one of the participants (Suárez, 2010). Hence, knowing how to work in a team brings benefits to students' learning, which will be effective to the extent that it is reflected on and its functioning is evaluated (Morales, 2007).

In this regard, cooperative learning enables team members to interact and make decisions throughout the learning process, maturing their ideas and managing information optimally for the organization of cooperative work (Martínez, 2021). An important finding is that cooperative learning generates an attitudinal improvement and predisposition towards learning in the different curricular disciplines (Gewald & Pérez, 2021).

That is why, in educational institutions, the human capacities of students must be strengthened through participatory educational work of forms of action that promote the use of cooperative strategies that favor the construction of high-quality relationships between peers (Cortés & Royero, 2020). In this sense, the transformation of the school and teaching practice also concerns the students themselves in their learning process for life (Hernández et al., 2015). Cooperative learning leads to a positive change in students' attitudes, reinforcing the knowledge acquired through active participation in the discussion of results, assuming responsibility, evaluating team performance and generating critical-reflective thinking (Yallico & Hernández, 2020).

Method

Design

The type of study was basic, because the main purpose was to explore and understand the relationship between two fundamental educational constructs: digital competence and cooperative learning in high school students. The non-experimental design is justified by its ability to observe and measure phenomena in their natural environment, avoiding any exogenous interference (Hernández & Mendoza, 2018). Since the main objective was to capture the intrinsic relationship between digital competence and cooperative learning in the real-world context, this design provides a coherent framework.

The study is at the correlational level that is based on analyzing the relationships between variables without establishing a cause-and-effect relationship. Since the study focused on assessing whether there is a relationship between digital competence and cooperative learning in high school students. This choice allowed an accurate assessment of the direction and magnitude of the relationship between the variables in question (Hernández & Mendoza, 2018).

The choice of questionnaires as data collection tools is justified due to their effectiveness in obtaining direct information from participants, which allowed a quantitative evaluation of attitudes, perceptions and levels of competence in the study context. Questionnaires were appropriate for collecting data for the study, such as this one, as they involved a representative sample of high school students (Hernandez & Mendoza, 2018).

Participants

The population consisted of a population of 931 students at the secondary education level of a state educational institution, and the study sample was made up of 215 students from the EBR. The sampling used was non-probabilistic since it was exempt from the criterion of chance (Pino, 2018). As an inclusion criterion, the questionnaire of questions was applied to students who are enrolled in the official registry of the educational institution and as an exclusion criterion to students who are not enrolled in the official registry of EI.

Instruments

In the research, the survey was used as a technique that allowed the collection of data from the participants, which was compiled through the interaction with the students who participated in the study, with the purpose of analyzing digital competence in accordance with cooperative learning in secondary school students (Hernández and Mendoza, 2018).

The research instrument used was the questionnaire that was built as a structure for the collection of data on the theoretical constructs studied and whose metric was designed on a Likert scale, for which the items responded to the dimensions of the study variables (Hernández & Mendoza, 2018).

The validation of the instrument was carried out by specialists in the evaluation of research instruments, who established that the application of the instruments should proceed based on the criteria of coherence, relevance, pertinence and sufficiency (Sánchez & Reyes, 2017).

The reliability of the research instruments was established through Cronbach's alpha statistic, which evidenced the internal consistency of the instruments; The findings allowed us to confirm that for the digital competence variable it was 0.893 and for the cooperative learning variable it was 0.820, which is established as good internal consistency between values of 0.7 to 0.9 (Gonzales & Pazmiño, 2015).

Data collection and analysis

The data collection process was carried out through a structure called a research questionnaire that made it possible to collect information inherent to the study constructs, informed consent was requested from the students of the educational institution; Likewise, descriptive and inferential statistical methods were used for the processing, organization and presentation of the information (Ávila, 2016).

Ethical criteria

Scientific research is fundamentally based on the ethical conduct of the researcher, which is reflected in his or her attitudes adhering to the principles of justice, equity, transparency, responsibility and integrity; In the development of the research, the authors of the basic theories of the study variables were cited and referenced, using the APA style norms in the body of the work carried out.

Results

Among the results obtained, it can be evidenced that, in Table I, a good level predominates in terms of digital competence in secondary school students with 60%, for the technological competence dimension it is fair with 50.7%, for the informational competence dimension it is good with 59.1% and for the pedagogical competence dimension it is good with 57.7%. highlighting the need to improve learning processes for the development of digital skills. In this regard, it should be noted that digital competence in students must be enhanced through collaborative work, involving the main actors of educational action that are directly related to the comprehensive training of students, such as teachers, management and administrative staff, so that in conjunction it is possible to achieve the institutional objective and transversal scope of mastery in knowledge management through ICTs. Likewise, teachers must incorporate digital resources into their learning sessions to optimally complement basic learning in students and thus generate a greater degree of motivation for learning in students, this in turn implies that teachers have to train themselves to achieve an optimal level of digital competence that allows them to provide an adequate educational service to the school population.

Table I. Level of Digital Competence and Its Dimensions in Secondary School Students

Level	Digital Competence		Technological competence		Informational competence		Pedagogical competence	
	f	%	f	%	f	%	f	%
Low	1	0.5	4	1.9	2	0.9	5	2.3
Regular	85	39.5	109	50.7	86	40.0	86	40.0
Well	129	60.0	102	47.4	127	59.1	124	57.7
Total	215	100.0	215	100.0	215	100.0	215	100.0

Note: Database

According to Table 2, a good level in relation to cooperative learning is good with 89.3%, in the positive interdependence dimension it is good with 87.4%, in the individual responsibility dimension it is good with 80.5%, in the face-to-face dimension with 82.8%, in the interpersonal techniques dimension it is good with 65.6% and in the group evaluation dimension with 62.3%; In this sense, cooperative learning should be promoted so that students can better develop their communication skills, social skills, and problem-solving skills in a comprehensive way. Cooperative work as a learning strategy enhances the development of capacities and skills in learners in which participation and decision-making in a responsible team is basically prioritized jointly and at a personal level, generating an attitude of commitment towards the achievement of relevant learning. In this process, it is evident that cooperative learning contributes students to a practice of solidarity, with an ethical action and with a positive interdependence that affirms the moral values of the students. That is why the dimensions of cooperative learning provide a broad panorama for the implementation of educational projects in which students are the key piece in the realization of educational objectives that envision positive changes in personal behavior and the management of emotions for a healthy coexistence in which everyone contributes with their knowledge and experiences in such a way that cognitive maturity is achieved among the participants.

Table 2. Level of Cooperative Learning and Its Dimensions in High School Students

Level	Cooperative Learning		Positive interdependence		Responsibility individual		Face-to-face interaction		Techniques Interpersonal		Group Assessment	
	f	%	f	%	f	%	f	%	f	%	f	%
Low	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	1.9
Regular	23	10.7	27	12.6	42	19.5	37	17.2	74	34.4	77	35.8
Well	192	89.3	188	87.4	173	80.5	178	82.8	141	65.6	134	62.3
Total	215	100.0	215	100.0	215	100.0	215	100.0	215	100.0	215	100.0

Note: Database

In relation to the normality of the data for the variable digital competence and its dimensions and the variable cooperative learning and its dimensions, a sig.=0.000 was obtained, which is less than 0.05, for that reason the statistics to be used will be non-parametric, consequently Spearman's rho statistical test will be used.

Table 3. Data Normality

	Kolmogorov-Smirnova		
	Statistical	gl	Say.
Technological competence	,328	215	,000
Informational competence	,383	215	,000
Pedagogical competence	,371	215	,000
Digital Competence	,390	215	,000
Positive interdependence	,522	215	,000
Individual Responsibility	,493	215	,000
Face-to-face interaction	,503	215	,000
Interpersonal and team techniques	,421	215	,000
Group Assessment	,397	215	,000
Cooperative Learning	,528	215	,000

Note: Database

According to Table 4, there is a direct and positive association between digital competence and the dimensions of the cooperative learning variable, corroborated with a probability of error less than 0.05, being Spearman's Rho correlation coefficient for an average level, this allows us to appreciate from the statistical point of view that the research variables are significantly associated in this sense, some educational actions should be implemented in relation to the to pedagogical strategies that help raise the level of cooperative learning in secondary school students, emphasizing the development of digital skills.

Table 4. Relationship between digital competence and the dimensions of the cooperative learning variable

Cooperative Learning (Dimensions)	Digital Skills	
	R	Say.
Positive interdependence	0.407	0.000
Individual Responsibility	0.482	0.000
Face-to-face interaction	0.432	0.000
Interpersonal and team techniques	0.279	0.000
Group Assessment	0.505	0.000

Note: Database

Finally, Table 5 shows a direct and positive correlation at a moderate level between digital competence and cooperative learning with a statistical value of Spearman's Rho coefficient of 0.572, evidenced by a p-value of less than 0.05. It is interpreted that pedagogical actions should be implemented in order to improve the didactic work with students, involving them in the constant improvement of basic learning in the EBR.

Table 5. Relationship between digital competence and cooperative learning

	Cooperative Learning	
	R	Gis.
Digital Competence	0.572	0.000

Note: Database

Discussion

In relation to the digital competence variable, it is confirmed that 60.0% (129) of the participants exhibit a "good" level, while 39.5% (85) are at the "regular" level. These results indicate that the majority of respondents have strong digital competence, suggesting a reasonable familiarity with digital tools and technologies. However, it is essential to focus on improving this competency in the remaining 0.5%, highlighting the need to strategically address education to strengthen digital skills. In the dimension of technological competence, 47.4% (102) are at the "good" level, while 50.7% (109) are at the "fair" level, indicating a balanced distribution of technological skills. This suggests opportunities for improvement in more advanced areas despite familiarity with technologies for learning. In the dimension of information competence, 59.1% (127) reach the "good" level and 40.0% (86) the "regular" level, highlighting the need to promote information literacy. In the dimension of pedagogical competence, 57.7% (124) have skills at a "good" level and 40.0% (86) at a "regular" level, with room for growth, especially for those who seek to perfect their learning.

In relation to the cooperative learning variable, the results show that 89.3% (192) are at a "good" level and 10.7% (23) at the "regular" level. In the dimension of positive interdependence, 87.4% (188) reach the "good" level and 12.6% (27) the "fair" level. In the dimension of individual responsibility, 80.5% (173) are at the "good" level and 19.5% (42) at the "fair" level. In the dimension of face-to-face interaction, 82.8% (178) demonstrate a "good" level and 17.2% (37) a "fair" level. In the dimension of interpersonal techniques, 65.6% (141) showed a "good" level and 34.4% (74) a "fair" level. In the group evaluation dimension, 62.3% (134) are at the "good" level and 35.8% (77) at the "fair" level. These results emphasize strong cooperative learning in the majority of participants, with dimensions such as positive interdependence, individual responsibility, face-to-face interaction, interpersonal techniques; as well as group evaluation, also showing a predominant presence of "good" levels. However, "regular" levels are identified, indicating areas that could benefit from focus and development in the field of learning.

According to the objective of determining the relationship between digital competence and cooperative learning, there is a correlation of rho=0.572 and p=0.000<0.05. We agree with Ciurlizza (2021), with the result between digital competence and collaborative learning being of a significant level, showing a correlation of rho=0.399 and p=0.000<0.05. Similarly, Valenzuela (2022) obtained a correlation between digital competences and cooperative learning with rho=0.886 and p=0.000<0.05. Likewise, Nina (2021) in her research work obtained as results that there is a direct and significant relationship between digital competences and cooperative learning with rho=0.772 and p=0.000<0.05.

In the perspective of Soto et al. (2023), it reinforces the importance of digital skills in the educational environment and in society in general. The results obtained in this research support this notion by demonstrating the preponderant figure of "good" levels in digital competence among secondary school students. Likewise, the responsible orientation of these competencies towards the educational community is highlighted in the findings consistent with cooperative learning, communication and social skills. These results highlight the pre-eminence of provoking an educational direction that allows the progress of digital skills to be promoted in an ethical and effective way to address the challenges of today's digital world.

As well as Carbajal's (2017) approaches to cooperative learning, they are aligned with the results of the research, which points out the guarantee of this strategy in the environment of secondary school students. The focus on collaboration, the establishment of participatory objectives and the construction of knowledge stand out in the

quality of cooperative learning as a meritorious didactic approach to elicit more revealing and enriching learning.

In relation to the digital competence variable and the dimensions of the cooperative learning variable, the results were obtained for the positive interdependence dimension (rho=0.407 and p=0.000<0.05), individual responsibility dimension (rho=0.482 and p=0.000<0.05), face-to-face interaction dimension (rho=0.432 and p=0.000<0.05), interpersonal and team techniques dimension (rho=0.279 and p=0.000<0.05) and group evaluation (rho=0.505 and p=0.000< 0.05); evidencing a concordance with Nina (2021) who obtained as results for positive interdependence (rho=0.505 and p=0.000<0.05), individual responsibility (rho=0.533 and p=0.000<0.05), group responsibility (rho=0.587 and p=0.000<0.05), stimulating interaction (rho=0.572 and p=0.000<0.05), interpersonal techniques (rho=0.709 and p=0.000<0.05) and group evaluation (rho=0.639 and p=0.000<0.05); This merits the promotion of pertinent and relevant didactic actions in order to improve the development of learning in students in a comprehensive way in which the contribution of each of the members is valued and their inherent capacities are reinforced.

In relation to the positive interdependence dimension (rho=0.407 and p=0.000<0.05), individual responsibility dimension (rho=0.482 and p=0.000<0.05), face-to-face interaction dimension (rho=0.432 and p=0.000<0.05), it is evident that there is agreement with Paredes and Ramos (2020) obtained as results the existence of a relationship between the variables social skills and group thinking (rho=0.614 and p=0.000<0.05), with the positive interdependence dimension (RHO=0.503 and p=0.000<0.05), with the promoter interaction dimension (rho=0.395 and p=0.001<0.05) and with the individual responsibility dimension (rho=0.454 and p=0.000<0.05); This leads to working with solid evidence and designing learning sessions that have a significant impact on teamwork by developing activities that enable problem-solving, creativity, reflection and an appreciative attitude.

In the analysis of the results obtained in this research, it is supported by the approaches of Sierralta (2023), the results obtained the incidence of digital competencies in organizational culture (Cox and Snell=0.570; Nagelkerke=0.677; McFadden=0.457 and p=0.000<0.05), argues that technological advances have generated significant transformations in society, impacting new ways of approaching daily activities. Thus, digital skills have the ability to influence the socio-educational environment through innovation, creativity and entrepreneurship.

Likewise, Cervantes and Balladares (2021) obtained sample results for the pretest (t=29.792 and p<0.001) and for the posttest (t=30.902 and p<0.001), concluded that digital skills favor students' academic performance significantly; They highlight the importance of digital competence in student learning. The research findings support the notion that digital competencies play a significant role in academic achievement, as they enable dynamic access to information and knowledge through technological tools.

Similarly, Grandez (2021) in his study reveals correlation coefficients (Cox and Snell=0.031; Nagelkerke=0.035; McFadden=0.014 and p=0.014<0.05) consistently reflect the relationship between digital competences and teacher performance compared to the results obtained in this research. Grandez's assertions about the transformative role of digital competencies in teaching practice and the need for adaptation for optimal performance resonate with the results presented in this study.

There is divergence with Laureano (2021): the results of his research do not show a relationship between digital skills and academic stress (rho=0.160 and p=0.153>0.05). On the other hand, it emphasizes that digital competencies are relevant for the acquisition of a set of skills that enable problem-solving in order to build knowledge in the learning process.

Similarly, there is agreement with Mera (2021) where he reveals the results between digital competence and innovative management (rho=0.744 and p=0.000<0.05); as well as with the connectivity and access dimension (rho=0.325 and p=0.006<0.05); with the dimension of technological skills (RHO=0.427 and p=0.000<0.05) and with the dimension of technological tools (rho=0.544 and p=0.000<0.05). Affirms that digital competence is decisive for the teaching and learning process, given that through the use of digital resources it enables a dynamic way in the acquisition of knowledge in an organised manner and a motivating effect on students; Thus, incorporation requires a training process that concerns not only students but also educators.

It is consistent with Hidalgo's (2023) study, as its results reveal a significant relationship between motivation and cooperative learning (rho=0.357 and p=0.005<0.05); with the interdependence dimension (rho=0.316 and p=0.014<0.05); with the responsibility dimension (rho=0.408 and p=0.001<0.05); with the interaction dimension (rho=0.342 and p=0.007<0.05); with the social skills dimension (rho=0.731 and p=0.001<0.05); and with the evaluation dimension (rho=0.521 and p=0.001<0.05). Cooperative learning aims to develop learning through dynamics in team didactic praxis, where interaction between peers is vital; It also contributes to the development of communication skills, inclusion and diversity of learners.

Theoretical Implications

The research was based on the theories of digital competence and cooperative learning, proposing to establish the relationship between these constructs and the impact on teaching practice, implementation of didactic strategies, educational design and planning, formative assessment and classroom climate, being essentially inherent to the work of teachers.

Limitations

The limitations that were had in the development of the research were in terms of access to updated documentary information, due to the fact that it is a topic of pedagogical interest and also at the time of application of the data collection instrument since it was virtual.

Future Studies

It is suggested to carry out studies to delve into those endogenous and exogenous factors that affect the relationship between digital competence and cooperative learning, making an exhaustive analysis of the impact on teaching performance, pedagogical leadership and didactic strategies in the EBR.

Conclusions

There is a significant and positive relationship at a moderate level between digital competence and cooperative learning, with a statistical value of Spearman's Rho coefficient of 0.572, evidenced by a p-value of less than 0.05; It is interpreted that with an optimal level of digital competence of the students, cooperative learning will be enriched, strengthening the capacities of the students for problem solving in the various areas of knowledge and the social environment. The positive correspondence between the investigated constructs is supported by constructivist, sociocognitive and extended mind theories, as well as by the approach to literacy and digital citizenship. These theories underscore how digital skills strengthen collaboration, problem-solving, and critical thinking in the educational and social environment, enriching cooperative learning and empowering students in the digital age.

A good level of digital competence predominates in secondary school students with 60%, for the technological competence dimension it is fair with 50.7%, for the informational competence dimension it is good with 59.1% and for the pedagogical competence dimension it is good with 57.7%, highlighting the need to improve learning processes for the development of digital skills. These findings provide a solid basis for the execution of educational strategies that further strengthen students' digital competencies and train them for an increasingly technological world.

A good level predominates in relation to cooperative learning is good with 89.3%, in the positive interdependence dimension it is good with 87.4%, in the individual responsibility dimension it is good with 80.5%, in the face-to-face dimension with 82.8%, in the interpersonal techniques dimension it is good with 65.6% and in the group evaluation dimension with 62.3%; In this sense, cooperative learning should be promoted so that students can better develop their communication skills, social skills, and problem-solving skills in a comprehensive way. These findings support the idea that cooperative learning is an energetic tool for developing the holistic formation of students in the educational context. It is emphasized that educational institutions must bet on implementing educational models that help improve educational quality, with teachers well prepared for teaching and students committed to educational work; The essential mission of the school is to prepare future citizens in a world of technology and ethical values.

6 Conflict of interest
The authors state that the research was carried out without the presence of commercial or financial relationships that could be interpreted as a potential conflict of interest.

Authors' Contributions
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