# **Migration Letters**

Volume: 20, No: S6(2023), pp. 1072-1086

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online) www.migrationletters.com

# Digital Competencies in Teaching Performance in an Educational Institution in Peru

Silvia Janampa Vergaray<sup>1</sup>, Hayde Romero Machaca<sup>2</sup>, Otoniel Silva Delgado<sup>3</sup>, Edidson Victor Fuentes Nina<sup>4</sup>, Carlos Santiago De La Fuente Barreda<sup>5</sup>

#### **Abstract**

The objective of the research is to determine the impact of digital competencies on the performance of teachers at a public educational institution in Peru; where the type of research is basic, the design is non-experimental, the level is descriptive correlational, where the sample is 68 teachers, the technique used is the survey and the instrument is the questionnaire, with a quantitative approach. It was found that the majority of teachers surveyed have considered their digital competencies in the teaching-learning process to be at a regular level, with the most prominent dimension being "Security"; which indicates that teachers are clear about the information they can share with students and about the use of personal data on networks, which were reinforced with the constant use they had in times of pandemic. Also, that the majority of teachers consider their teaching performance in the classroom to be of an adequate level, it is highlighted that the development of professionalism and teaching identity are aspects that are internalized in them and that allow innovation and the development of good practices. It was concluded that there is a positive impact of digital skills on teachers' performance.

**Keywords:** Digital skills, teacher performance, ICT tools.

# **INTRODUCTION**

The constant advancement of science and technology generates new challenges for entities, mainly related to knowing how to adapt to changes that allow them to provide an adequate service to the target audience; And this is more evident in the education sector, since it requires modern facilities that contribute to the process of teaching and learning, that have the equipment to provide a comprehensive service to students, in addition to a central aspect, which refers to teachers being trained in the use of collaborative teaching strategies and in the use of technological platforms that complement their teaching work.

In the case of Peru, MINEDU (2014) published a practical guide to promote good teacher performance, from the perspective of their domains and competencies for each one, which has been applied in the different regional directorates and UGELs, but despite this, the level of development has not improved significantly. and this is denoted in the

<sup>&</sup>lt;sup>1</sup> Magíster de Docencia Universitaria y Gestión Educativa, Universidad Privada de Tacna, correo2.silvita@gmail.com, https://orcid.org/0009-0004-4497-164X

<sup>&</sup>lt;sup>2</sup> Bachiller en Educación, Universidad Nacional de San Agustín, hayderom@gmail.com, https://orcid.org/0009-0009-2359-4474

<sup>&</sup>lt;sup>3</sup> Doctor en Ingeniería de Sistemas, Universidad José Carlos Mariátegui, ottoniel\_silva@ujcm.edu.pe, https://orcid.org/0000-0002-5899-5659

<sup>&</sup>lt;sup>4</sup> Magíster de Docencia Universitaria y Gestión Educativa, Universidad Nacional Jorge Basadre Grohmann, efuentesn@unjbg.edu.pe, https://orcid.org/0000-0001-9547-3385

Magíster en Gestión Émpresarial, Universidad Andina del Cusco, cdelafuente@uandina.edu.pe, https://orcid.org/0000-0002-8526-5141

history of the results of the ECE tests, demonstrating that there are still shortcomings in reading and mathematical comprehension; standing out more in the area of mathematics, where students do not adequately solve problematic situations, due to deficiencies in reading comprehension; Despite this; The level of teacher performance has not improved significantly, and there are other factors such as the weak support of subnational governments with the implementation of strategies to accompany and/or reinforce the work of teachers.

Santillán (2011) highlights that a key aspect to provide the educational service is that the teacher has digital skills, which implies knowing how to create and use digital strategies that contribute to connectivity with students; it is complemented by Bacca (2016), who states that this contributes to the achievement of freedom in learning, in being innovative and in the modification of behavior. But the Covid-19 pandemic that hit the world mainly in 2020 and 2021, has laid bare a sad reality regarding education in Peru, that teachers do not have, on average, the digital skills required to train students in the 21st century. It is necessary to strengthen these skills through constant training.

In the case of the department of Tacna, which is the field of research, since 2015 it has had the first places in the levels of reading and mathematical comprehension, according to the results of the ECE test; But despite this, the pandemic has made it possible to show that the connectivity problems of the districts (mainly in the Andean districts) are strong, that teachers lack didactic strategies where the technological component is key to learning, among others; This shows that teacher performance needs to be evaluated and improved; For this purpose, a public educational institution has been considered, which is a school that, despite being located in the center of the city, the vast majority of its teachers are appointed and experienced, among others, lacks having results of impact at the regional level; Therefore, it is denoted that there are problems related to the performance of the teacher, which it is necessary to identify and analyze, considering as a factor of this, the inadequate level of digital competences that characterizes them.

The general objective of the research was to determine the impact of digital competencies on the performance of teachers in a public educational institution in Peru; the specific objectives were: To analyze the impact of information and information literacy, collaboration and communication, the creation of digital content, safety, and problem solving in the performance of teachers in a public educational institution in Peru.

On the theoretical basis of digital competences, some definitions stand out, such as that of Zavala et al. (2014) who highlight that it is a group of skills related to the use of various computer tools, which a person has to develop personally and professionally, in addition to communicating creatively; also that of Gutiérrez (2014) who argues that it encompasses the skills, knowledge and attitudes that a certain person has regarding the application of various technological resources, which contributes to obtaining information from networks to transform knowledge; and what is exposed by Carrera and Coiduras (2012), who specify that these are skills that a person has, which allows him to master the use of technological tools for the teaching of classes, in addition to being able to interact with students, regarding the content of the course, the evaluation, others. In summary, being digitally competent implies that the person has the skills and abilities for the proper use of technological aspects, both in their personal and professional life, which contributes to improving the level of communication with others.

The relevance of technology is access to diverse global information, on topics relevant to work, personal, family, and other issues; In this regard, Marques (2008) specifies that a key aspect to become digitally competent is the attitude of the person, since it is necessary to be able to understand that this subject requires constant practice on the use of ICTs and the Internet; With regard to educational issues, teachers must necessarily incorporate technological support into their lesson plans to complement the content provided, in addition to generating their own teaching materials, and must increase their

level of interaction and communication with their students by making use of digital media. More specifically, Marques (2008) points out that there are levels of use of ICT for teaching work: to provide tutoring to students, to achieve literacy in the use of ICTs, to apply and explain each of the didactic materials proposed for the development of classes, and to achieve greater interaction between groups.

The educational aspects have various theories that develop them, in this regard the work of Valdez (2012) is rescued, who compares them but considering the level of implication of the use of ICTs in their assumptions (See Table 1); In this regard, the constructivist theory stands out, where it is argued that the use of technology is key in the process of generating knowledge, being necessary the existence of previous knowledge, then progress is made in learning that will later become previous experiences to form mental schemes, here the student has a constant active participation, which causes perceptions and feelings to appear, where the computer serves as a support for it; Here the teacher assumes the role of promoter of the activities and of being a guide.

Table 1 Pedagogical Theories, A Comparative Analysis

	Behaviorist	Humanist	Cognitive	Cultural	Constructivist
Essential Fundamentals	It studies human behavior with a deductive method and as an observable, measurable, and quantifiable behavior	Human beings tend towards self- realization and transcendence	It focuses on the study of mental representations, having rationalist characteristics with tendencies towards constructivism	The process of individual cognitive development is not independent or autonomous from sociocultural processes in general or from educational processes in particular	It attempts to explain the nature of human knowledge on the basis of prior knowledge that gives rise to new knowledge
Goals of Education	The maximum possible development potential of human urbanism	Promote people's self-actualization so that they achieve the best of what they are capable of	Getting students to learn how to learn and to use self-regulation skills by promoting curiosity, doubt, creativity, reasoning, or self-learning	Promote the socio- cultural or cognitive development of the student	To create men who are capable of doing new things and not repeating what other generations have done, men who are creative, inventive and discoverers
Conceptualization of learning	Learning is the permanent modification of the observable behavior of	A process that modifies the perception that individuals have of	A dynamic, active and internal process, a change that occurs between what has been	Good learning is that which precedes development	To promote and enhance the cognitive development of the student by promoting their moral

	organisms as a result of experience	things derived from the affective self. Self- initiated learning to be long-lasting and profound	previously acquired and what is new		and intellectual autonomy
Role of the Teacher	He is an education technologist who applies reinforcement contingencies to produce knowledge	Facilitate student learning and provide decent learning conditions	Preparation and organization of didactic experiences promoting dynamic learning	Teaching in an interactive situation, promoting development zones	Promoter of the development and autonomy of learners. Know the problems and characteristics of each one

Note. Valdez (2012)

Regarding the dimensions used for the analysis of this variable, it is specified that the proposal applied by Camacho (2022) was used, who carried out a research focused on analyzing the digital competencies of teachers in a basic education school, which is similar to what is intended to be done with this work. You have:

- Information and information literacy: Implies knowledge and mastery of various digital tools, the indicators being: Use digital materials, use digital platforms, manage digital knowledge, use blogs and websites.
- Communication and collaboration: Involves the level of use of digital tools to interact with others, with the following indicators: Digital communication, promotes teamwork, promotes collaborative work, shares progress from class to platform.
- Creation of digital content: It involves the use of digital tools to innovate content, the indicators being: Web space to interact, prepares classes with platforms, teaches programming and design, managers promote digital creation.
- Security: Implies the level of knowledge about the security tools for the use of virtual information, being the indicators; Clarity of information that should not be shared, use of personal data in networks, instructs on the use of the cloud, training on digital security.
- Problem solving: It involves the use of technology to deal with personal and/or professional problems, with the following indicators: Solving technological problems, digital creativity, assessing digital proficiency, training in the use of digital platforms.

On the theoretical basis of teaching performance, some definitions stand out, such as that of Ovando et al. (2012) who emphasize that it is the performance of the teacher in his teaching work, for which he requires to have the deep knowledge of the course to be taught, which will allow him to guide his students and generate knowledge; that of the MINEDU (2012) where it is detailed that it must be constantly demanded in its preparation, and not only in what refers to the pedagogical theme, they must also be involved in management, administrative and community work that contributes to learning; and that of Estrada (2010) who gives great importance to the fact that it is a profession that is the central axis to train citizens (good people for society), and for this he implements various pedagogical strategies to achieve knowledge in the student. Where it has to be that it is the development of the teacher in the classroom, to ensure that their

students learn and train for life, for which they apply various pedagogical techniques and strategies, where the technological component is key.

Koontz and Weihrich (2007) describe that managers must implement various strategies to ensure that personnel can perform in conditions that can perform and meet work demands, such as: Know how to recognize the effort of the staff, providing remuneration, gratuities and/or incentives in accordance with the demands of the job, the market and the budgetary availability of the entity; prioritize the development of the capacities of the personnel, mainly those that allow them to improve their performance in the workplace; there is constant communication between managers and staff, where they are told about the progress of the management, their participation in various activities that contribute to the competitiveness of the entity is motivated; and make investments to provide a better service, carry out timely maintenance of equipment and infrastructure that allows sustainability over time.

Within the normative aspects in Peruvian education, the MINEDU (2014) has published the framework of Good Teacher Performance, made up of 04 domains that the teacher must achieve, as it will be the motivation for their evaluation; and that were the dimensions used in this work, we have:

- Preparation for student learning: Implies how much knowledge and mastery of the subject the teacher has; The indicators are: Knows the peculiarities of the student, applies pedagogical approaches, plans the class contents, schedules the use of resources and reviews the programming.
- Teaching for student learning: Refers to the use of various ways of transmitting knowledge; The indicators are: It fosters a classroom atmosphere, forms critical citizens, uses pedagogical resources, frequently evaluates progress, and provides personal feedback.
- Participation in the management of the school articulated to the community: This involves getting involved in the various issues that affect the school; The indicators are: Promotes the democratic attitude, participates in educational management, cares about the implementation of the Institutional Educational Project PEI, respects and values others, reports on progress.
- Development of professionalism and teaching identity: This involves supporting others and committing to the entity; The indicators are: Supports others, promotes collective learning, ethical behavior, respects the rights of the person, responsibility and commitment.

#### MATERIAL AND METHODS

The research has a quantitative approach, it was used in a hypothetical-deductive method, the type is basic, the scope is correlational, the design is non-experimental because the variables were not altered (Hernandez et al. , 2014), the data were collected by cross-section, a census was made because the 68 teachers of a Public I.E. of Peru (24 at the primary level and 44 at the secondary level) were surveyed.

The variables, dimensions and indicators are detailed in the following table:

Table 2 Operationalization of variables

VARIABLE	DIMENSION	INDICATOR	SCALE
Independent variable:	- Information and Information Literacy	Use digital materials. Use digital platforms.	Ordinal
Digital Skills	Information Energy	Manage digital knowledge.	
		Use blogs and websites.	

	- Communication & Collaboration	Digital communication. Boost teamwork. Promote collaborative work. Share class trailers by platform.
	- Digital Content Creation	Web space to interact. Prepare classes with platforms. It teaches programming and design. Managers drive digital creation.
	- Safety	Clarity of information that should not be shared. Use of personal data on social networks. Instruct on the use of the cloud. Digital security training is
	- Problem Solving	provided.  Solve technology problems. Digital creativity. Assess digital proficiency. They are trained in the use of digital platforms.
Dependent variable: Teaching performance	- Student Learning Readiness	Get to know the student's Ordinal peculiarities.  Apply pedagogical approaches.  Plan the class content.
•	- Teaching for Student Learning	Schedule resource usage. Check the schedule.
	- Participation in the management of the school articulated to the community	It fosters a classy atmosphere. It trains critical citizens. Use pedagogical resources. Evaluate progress frequently. Give personal feedback.
	- Development of Teaching Professionalism and Identity	It promotes the democratic attitude.  Participate in educational management.  It is concerned with the implementation of the IEP.  Respect and value others.  Report on progress.
		Support others. It promotes collective learning. Ethical behavior. Respect the rights of the individual. Responsibility and commitment

Regarding the technique to collect the data, the survey was used; the instrument being the questionnaire, which are: Digital Competencies Questionnaire and Teacher Performance Questionnaire. These instruments were reviewed and validated by 03 experts, who rated them as very suitable for use in fieldwork; Regarding reliability, a Pilot Test of 20 teachers was used, and whose Cronbach's Alpha results are: 0.921 for the digital competencies questionnaire and 0.938 for the teacher performance questionnaire. The items presented five alternative responses, which are analyzed using the Likert Scale, considering: "Never" (value = 1), "Almost never" (value = 2), "Sometimes" (value = 3), "Almost always" (value = 4) and "Always" (value = 5).

### **RESULTS**

The results obtained in Table 3 represent the variable "Digital competences", of which 55.9% of the teachers of a public EI in Peru consider their digital competences in the teaching-learning process to be of a regular level, 41.2% consider it to be of an adequate level and 2.9% that it is of an inadequate level; Therefore, the vast majority highlight that they know and apply various technological tools in their classes, and that as a result of the pandemic this has improved.

Table 3 Independent variable – "Digital skills"

	Level	Teacher	Percentage
Inadequate		2	2,9
Regular		38	55,9
Adequate		28	41,2
	Total	68	100,0

Note. Questionnaire "Digital Competences"

Table 4 proceeds to make a descriptive comparison of the dimensions of the variable "Digital Competences", of which the most prominent is "Security" (82.4% is at the "Adequate" level), followed by "Information and Information Literacy" (54.4% is at the "Regular" level), being the one focused on reinforcing the "Creation of digital content" (32.4% is at the "Inadequate" level).

Table 4 Independent variable – "Digital skills" (by dimension)

Dimension		Teacher	Percentage
Information and Information Literacy	Inadequate	2	2,9
	Regular	37	54,4
	Adequate	29	42,6
Communication & Collaboration	Inadequate	2	2,9
	Regular	45	66,2
	Adequate	21	30,9
Digital Content Creation	Inadequate	22	32,4
	Regular	32	47,1
	Adequate	14	20,6
Safety	Inadequate	3	4,4
	Regular	9	13,2

	Adequate	56	82,4
Problem Solving	Inadequate	5	7,4
	Regular	39	57,4
	Adequate	24	35,3

Note. Questionnaire "Digital Competences"

With regard to the indicators of the "Digital skills" variable, we have:

- Dimension "Information and information literacy", the aspect most highlighted by the teacher is that he uses various digital materials (Word, Excel, power point, pdf, others) in classes to transmit the knowledge of the course, being the aspect to improve the application of various blogs and web pages that complement the teachings in classes.
- Dimension "Communication and collaboration", the aspect most highlighted by the teacher is that it is characterized by developing collaborative work supported by ICT, being the aspect to improve the greater frequency of use of a platform to share the progress of classes.
- Dimension "Creation of digital content", the aspects focused on improving are to be characterized more by teaching their students the use of various digital platforms, so that they can program and design, and to have their own space on the web to interact with their students.
- "Security" dimension, the aspects most highlighted by the teacher is that he teaches his students about the security they must have regarding the use of their personal data by social networks, and that he is clear that students' personal information should not be shared by digital means.
- Dimension "Problem solving", the aspect most highlighted by the teacher is that when technological problems arise in classes, he is characterized by knowing how to solve them, being the aspect to improve by applying various questions to his students, which allow him to know the level of use and mastery of the platforms seen in classes.

The results obtained in Table 5 represent the variable "Teaching performance", of which 86.8% of the teachers of a public EI in Peru consider their performance in the classroom to be of an adequate level, 13.2% consider it to be of a regular level and 0.0% that it is of an inadequate level; Therefore, the vast majority highlight that they have the competencies and skills to carry out their teaching work in an outstanding way.

Table 5 Dependent Variable – "Teacher Performance"

	Level	Teacher	Percentage
Inadequate		0	0,0
Regular		9	13,2
Adequate		59	86,8
	Total	68	100,0

Note. Questionnaire "Teaching Performance"

Table 6 descriptively compares the dimensions of the variable "Teaching performance", of which the most prominent is the "Development of professionalism and teaching identity" (91.2% is at the "Adequate" level), followed by "Teaching for student learning" (89.7% is at the "Adequate" level), with the one focused on reinforcing "Participation in the management of the school articulated to the community" (80.9% is at the "Adequate" level).

Table 6 Dependent Variable – "Teacher Performance" (by Dimension)

Dimension		Teacher	Percentage
Student Learning Readiness	Inadequate	0	0,0
	Regular	17	25,0
	Adequate	51	75,0
Teaching for Student Learning	Inadequate	0	0,0
	Regular	7	10,3
	Adequate	61	89,7
Participation in the management of the school	l Inadequate	2	2,9
articulated to the community	Regular	11	16,2
	Adequate	55	80,9
	d Inadequate	0	0,0
Identity	Regular	6	8,8
	Adequate	62	91,2

Note. Questionnaire "Teaching Performance"

With respect to the indicators of the "Teacher performance" variable, we have:

- Dimension "Preparation for student learning", the aspect most highlighted by the teacher is that he always applies the process of planning the contents to be taught, which guarantees learning; the aspect to be improved is to have a detailed program on the use of resources for the pedagogical process.
- Dimension "Teaching for student learning", the aspects most highlighted by the teacher are that he is characterized by constantly evaluating the progress in the learning of his students, and that he is very concerned that in his classes he seeks to form citizens who are critical and intercultural.
- Dimension "Participation in the management of the school articulated to the community", the aspect most highlighted by the teacher is that it is characterized by respect and appreciation for the members of the educational community; being the aspect to improve the having a greater concern for the implementation and evaluation of the Institutional Educational Project.
- Dimension "Development of professionalism and teaching identity", where the aspects most highlighted by the teacher are that it is characterized by unrestricted respect for the fundamental rights of the person, and that responsibility and commitment to the educational community are aspects that distinguish it.

On the hypothesis test, we have:

a) The first specific hypothesis states: "There is a positive impact of information and information literacy on the performance of teachers in a public educational institution in Peru."

H0: There is no positive impact.

H1: There is a positive impact.

An Rho = 0.361 (p = 0.002) was obtained, H0 was rejected; There is a positive impact of information and information literacy on teachers' performance.

Table 7 Testing of Specific Hypothesis No. 01

			Information and Information Literacy	Teaching performance
Spearman's	Information	and Rho	1,000	0,361
Rho Information Literacy	p		0,002	
		n	68	68
	Teaching	Rho	0,361	1,000
p	performance	p	0,002	
		n	68	68

Note. Both instruments

b) The second specific hypothesis specifies: "There is a positive impact of collaboration and communication on the performance of teachers in a public educational institution in Peru."

H0: There is no positive impact.

H1: There is a positive impact.

An Rho = 0.420 (p = 0.000) was obtained, H0 was rejected; There is a positive impact of collaboration and communication on teachers' performance.

Table 8 Testing of Specific Hypothesis No 02

			Communication & Collaboration	Teaching performance
Spearman's	Communication	& Rho	1,000	0,420
Rho Collaboration	p	•	0,000	
		n	68	68
	Teaching	Rho	0,420	1,000
	performance	p	0,000	
		n	68	68

Note. Both instruments

c) The third specific hypothesis specifies: "There is a positive impact of the creation of digital content on the performance of teachers, a public educational institution in Peru."

H0: There is no significant impact.

H1: There is significant impact.

An Rho = 0.327 (p = 0.007) was obtained, H0 was rejected; There is a positive impact of the creation of digital content on teachers' performance.

Table 9 Testing of Specific Hypothesis No 03

			Digital Content Creation	Teaching performance
Rho Cro	Digital	Content Rho	1,000	0,327
	Creation	p		0,007
		n	68	68
	Teaching performance	Rho	0,327	1,000
		p	0,007	
		n	68	68

Note. Both instruments

d) The fourth specific hypothesis specifies: "There is a positive impact of safety on the performance of teachers in a public educational institution in Peru."

H0: There is no positive impact.

H1: There is a positive impact.

A score of 0.520 (p = 0.000) was obtained, and H0 was rejected; There is a positive impact of safety on teacher performance.

Table 10 Testing of Specific Hypothesis No 04

			Safety	Teaching performance
Spearman's Rho	Safety	Rho	1,000	0,520
		p		0,000
		n	68	68
	Teaching	Rho	0,520	1,000
	performance	p	0,000	
		n	68	68

Note. Both instruments

e) The fifth specific hypothesis specifies: "There is a positive impact of problem solving on the performance of teachers in a public educational institution in Peru."

H0: There is no positive impact.

H1: There is a positive impact.

A score of 0.439 (p = 0.000) was obtained, and H0 was rejected; There is a positive impact of problem-solving on teacher performance.

Table 11 Testing of Specific Hypothesis No 05

			Problem Solving	Teaching performance
•	Problem Solving	Rho	1,000	0,439
Rho		p		0,000
		n	68	68

Teaching	Rho	0,439	1,000	
performance	p	0,000		
	n	68	68	

Note. Both instruments

The general hypothesis specifies: "There is a positive impact of digital competencies on the performance of teachers in a public educational institution in Peru."

H0: There is no positive impact.

H1: There is a positive impact.

A score of 0.457 (p = 0.000) was obtained, and H0 was rejected; There is a positive impact of digital skills on teachers' performance.

Table 12 General Hypothesis Testing

			Digital Skills	Teaching performance
Spearman's Rho	Digital Skills	Rho	1,000	0,457
		p		0,000
		n	68	68
	Teaching performance	Rho	0,457	1,000
		p	0,000	
		n	68	68

Note. Both instruments

### **DISCUSSION**

Considering the field results obtained, it is necessary to determine whether there is a positive impact of digital competencies on the performance of teachers in a public educational institution in Peru, which implies that the application of institutional strategies conducive to improving the level of digital competencies of teachers generates an improvement in their level of development in their pedagogical work; which is in line with the results obtained by Camacho (2022), who concludes that teachers have a positive and high perception of digital skills; on the other hand, it does not agree with the findings of Reyna (2022), who concludes that most teachers have problems when creating, designing and applying teaching resources using ICTs, which leads to the perception that their digital skills are regular or inadequate.

It is consistent with the work of Portuguez et al. (2022), who conclude that there is a positive and moderate relationship between teachers' digital competencies and their performance; since it was obtained that digital competencies have an impact on teacher performance; similarly, we agree with Baca (2021), who concludes that there is a very high direct relationship between digital skills and teacher performance in class; given that the research carried out found an impact on the impact of the significant impact on teachers' performance.

It is also in agreement with the work of Benavides (2020), who concludes that there is a direct and moderate relationship between digital competencies and teachers' development; since it was found that teachers' digital competencies have a positive impact on their performance in classes.

Regarding the first specific hypothesis, it was found that there is a positive impact of information and information literacy on the performance of teachers in a public educational institution in Tacna, which implies that a teacher who is trained and informed in digital competencies would generate a better pedagogy in the educational institution; This reinforces what Camacho (2022) said, who points out that information literacy implies knowledge and mastery of various digital tools, and that it is positively related to educational quality, where the outstanding performance of the teacher is key.

Regarding the second specific hypothesis, it was found that there is a positive impact of communication and collaboration on the performance of teachers, which means that the greater the interaction with other teachers regarding the application of the various technological methodologies to complement the classes, generates a better pedagogical performance in the Educational Institution; This reinforces what Camacho (2022) said, who points out that collaboration involves the use of digital tools to interact with others, and that it is directly related to educational quality, where outstanding teacher performance is key to the proper development of the teaching-learning process.

Regarding the third specific hypothesis, it was found that there is a positive impact of the creation of digital content on the performance of teachers, which leads to strengthening the capacities of teachers so that they can create, program, design and apply their digital content in class, all of which helps to improve their pedagogical performance in the Educational Institution; This reinforces what Camacho (2022) said, who points out that in order to create this content, the use of digital tools is required to innovate content, and that it is directly related to educational quality, where the development of the teacher is vital.

Regarding the fourth specific hypothesis, it was found that there is a positive impact of security on the performance of teachers, which is related to the clarity of the information shared by the teacher and guides students on the security that must be had for the management of personal data in social networks and the use of the cloud. generates an improvement in their teaching performance in the Educational Institution; This reinforces what Camacho (2022) said, who points out that it is a matter of guiding the knowledge of security tools for the use of virtual information, and that it is positively related to educational quality, where teacher performance is vital.

Regarding the fifth specific hypothesis, it was found that there is a positive impact of problem solving on teachers' performance, the implications of our study allow us to demonstrate that teachers are aware of the training received on technological problem solving and digital creativity within the framework of good teacher performance and according to the rubrics of teacher evaluation. for the application of various strategies and to be able to face problems in the use of computer tools, generating an improvement in their teaching performance in the Educational Institution; This reinforces what Camacho (2022) said, pointing out that it is the use of technology to deal with personal and/or professional problems, and that it is positively related to educational quality, where teacher performance is vital.

### **CONCLUSIONS**

In this study, it was found that there is a positive impact of digital competencies on the performance of teachers in a public educational institution in Peru; taking into account that the use of ICT is currently quite relevant, since students must be able to develop in the various virtual environments generated by ICTs, which implies that the greater the digital competence, the better the teaching performance in the classroom; In addition, the majority of teachers consider their digital competencies in the teaching-learning process to be at a regular level, with the most prominent dimension being "Security" and the one focused on reinforcing the "Creation of digital content"; and the majority consider their

development in the classrooms to be at an adequate level, the most prominent dimension being the "Development of professionalism and teaching identity" and the one focused on reinforcing the "Participation in the management of the school articulated to the community".

There is a positive impact of information and information literacy on the performance of teachers in a public educational institution in Peru; This implies that the improvement in the level of information and information literacy is reflected in an improvement in the performance of the teacher.

There is a positive impact of collaboration and communication on the performance of teachers in a public educational institution in Peru; This implies that the improvement in the level of collaboration is reflected in an improvement in the teacher's performance.

There is a positive impact of the creation of digital content on the performance of teachers in a public educational institution in Peru; This means that the improvement of teachers' abilities to create digital topics and the empowerment they have over the digital skills they acquire with practice in the pandemic motivated and committed them to insert the use of ICT in their projects, which is regularly reflected in an improvement in teacher performance.

There is a positive impact of safety on the performance of teachers in a public educational institution in Peru; This is reflected in the fact that teachers taught their students, the security in the proper use of their personal data on the different digital platforms and the clarity of the information to be shared on networks, these aspects are reflected in an improvement in the teacher's performance.

There is a positive impact of problem solving on the performance of teachers in a public educational institution in Peru; that implies a better use of digital strategies, to face various computer problems, applying creativity and criticality; This is reflected in an improvement in teacher performance.

# References

- Bacca, A. (2016). Proposal of pedagogical strategies aimed at strengthening the use of information and communication technologies in virtual learning environments. UNAD Open Distance University, Aberdeen, Scotland; https://repository.unad.edu.co/handle/10596/6324
- Baca, Z. (2021). Digital Competencies and Teaching Performance in the Miguel Grau Educational Institution Seminario del Cusco, 2020; thesis from the César Vallejo University; https://repositorio.ucv.edu.pe/handle/20.500.12692/56198
- Benavides, G. (2020). Digital Competencies and Teaching Performance in a State Educational Institution, Villa El Salvador, 2020; doctoral thesis from the César Vallejo University; https://repositorio.ucv.edu.pe/handle/20.500.12692/47770
- Camacho, H. (2022). Teacher digital competencies and quality of educational service in a secondary school in San Martín de Porres, 2022; thesis from the César Vallejo University; https://repositorio.ucv.edu.pe/handle/20.500.12692/101010
- Hernandez, R.; Fernández, C., & Baptista, M. (2014). Research methodology. Mexico: Editorial McGraw-Hill Educación. 6th edition.
- Koontz, H., & Weihrich, H. (2007). Administration, a global perspective. Mexico: Editorial McGraw-Hill. XI Edition.
- Marques, P. (2008). Digital skills, what for? http://peremarques.net/competenciasdigitales.htm
- MINEDU. (2014). Good Teacher Performance Framework; http://www.minedu.gob.pe/pdf/ed/marco-de-buen-desempeno-docente.pdf
- Ovando, Y., Melo, J., & Rez Mu Oz, L. (2012). Assessment of teaching competencies and performance. Madrid: Editorial Académica Española.

- Picón, G., González, G., & Paredes, J. (2021). Teacher performance and training in digital competencies in remote classes during the COVID-19 pandemic; ARANDU-UTIC, 8(1), pp. 139-153; https://dialnet.unirioja.es/servlet/articulo?codigo=8070339
- Portuguez, J. M., Medina, L. F., Alanya, E. & Castro, L. (2022). Digital competence and teaching performance in Peru. Journal of Educational Proposals, 4(7), pp. 44–53. https://doi.org/10.33996/propuestas.v4i7.774
- Reyna, A. (2022). Digital Competencies and Teaching Performance in Latin American Schools. Challenges, 13(1), pp. 25-36. https://doi.org/10.37711/desafios.2022.13.1.367
- Santillan, J. (2011). Dimensions of digital skills. International Book Fair. Lima: https://es.slideshare.net/santillan/dimensiones-de-las-competenciasdigitales
- Valdez, F. (2012). Educational theories and their relationship with information and communication technologies (ICTs); lecture at the Research Congress of the National Autonomous University of Mexico; http://congreso.investiga.fca.unam.mx/docs/xvii/docs/L13.pdf
- Zavala, D., Muñoz, K. & Lozano, E. (2014). An approach to teachers' digital competencies. Revista Publicando, 3(9), pp. 330-340; https://dialnet.unirioja.es/servlet/articulo?codigo=5833540