

## Digital Literacy and its Impact on the Work Performance of the Collaborator of a State Entity

Sofía Emilce Belleza-Torrejón<sup>1</sup>, Nelly María Pérez-De la Cruz<sup>2</sup>, Elías Manuel Guarniz-Vásquez<sup>3</sup>, Cecilia Celeste Mendoza-Aguilar<sup>4</sup> and Jenny Martha Quispe-López<sup>5</sup>

### Abstract

*The main objective of the development of this article was to determine the impact of digital literacy on the work performance of the employee of a state entity, for which a quantitative approach methodology was used with a non-experimental correlational, causal, explanatory and cross-sectional design, with a population of 137 participants and a census-type sample. obtained under a non-probabilistic convenience sampling, thus a SIG.<0.05 was obtained indicating that literacy significantly impacts work performance, likewise under the Nagelkerke value of 0.902, the hypothesis is reinforced by mentioning that digital literacy impacts 90.2% on the development of the employee of a state entity, thus concluding that, the higher the level of digital literacy that the employee maintains based on the use of technologies to fulfill their functions, the greater their impact and level of work performance.*

**Keywords:** Digital Literacy. Work Performance

### INTRODUCTION

Nowadays, in many countries around the world there is a great interest in improving both the quality of society and the quality of work, which is why many digital literacy programs are being developed, as most of these programs are struggling to achieve their intended goals, so government policies have put in place measures to help bring about the desired changes in terms of detection and improvement of the operation of these programs, as can be seen from multiple investigations carried out in recent years. You can discover what exists. Little attention is paid to digital skills in the proper use of utility technology tools to perform their functions. (García et al., 2021)

Kwayu et al. (2021) added that the increasing use of digital technology efficiently influences the development of knowledge, thus facilitating decision-making within the organization, as well as delegation to fulfill the various roles and functions among employees. Thus, Montero et al. (2020) mention that digital literacy poses new challenges for the various public and private entities, where employees necessarily need to acquire and promote the development of skills, knowledge and approaches for the correct use of technical tools, digital skills in the various areas of problem solving, thus exercising a correct performance for a good service to users

In the same way, Lores et al. (2019) inform us that society currently requires people to have comprehensive knowledge, including IT skills, to improve productivity in a variety of workspaces. These competencies should focus on being oriented to the development of digital skills, contribution, communication, trust, promotion of digital content and problem solving in the modern world, taking as their main focus authorities such as officials and employees of intermediate units of the Ministry of Education, these being the Ugeles, among others.

Regarding the first thematic axis, i.e., digital literacy related to the development of ICT management capacities, it cannot be denied that this knowledge is important for all workers in the country (Oseda et al., 2021). Therefore, it is assumed that this activity is ideal to promote the development of attitudes, aptitudes and skills

---

<sup>1</sup> Universidad Cesar Vallejo Chimbote, Perú. E-mail: [sbelleza@ucvvirtual.edu.pe](mailto:sbelleza@ucvvirtual.edu.pe), Orcid: <https://orcid.org/0000-0002-0700-9628>

<sup>2</sup> Universidad Cesar Vallejo Chimbote, Perú. Email: [nperezde@ucvvirtual.edu.pe](mailto:nperezde@ucvvirtual.edu.pe), Orcid: <https://orcid.org/0000-0001-6758-6980>

<sup>3</sup> Universidad Cesar Vallejo Chimbote, Perú. E-mail: [manuelperu09@hotmail.com](mailto:manuelperu09@hotmail.com), Orcid: <https://orcid.org/0000-0003-4269-8606>

<sup>4</sup> Universidad Cesar Vallejo Chimbote, Perú. E-mail: [cmendozaag@ucv.edu.pe](mailto:cmendozaag@ucv.edu.pe), Orcid: <https://orcid.org/0000-0002-5495-7129>

<sup>5</sup> Universidad Cesar Vallejo Chimbote, Perú. E-mail: [jmquispel@ucvvirtual.edu.pe](mailto:jmquispel@ucvvirtual.edu.pe), Orcid: <https://orcid.org/0000-0001-7624-9695>

required by public servants, promoting characteristics such as: location, identification, storage, and processing of information digitally. In this way, Altamirano (2021) adds that the development of digital literacy is focused on the appropriate capacities to be able to solve problems based on communication and interaction of information in digital media.

Milenkova (2021) argues that the concept of digital literacy is a relatively new concept and still poses some difficulties in understanding it due to the existence of several related terms, such as skills, technology, information, digital, and the twenty-first century. The European Union uses digital media and digital skills differently in research literature and education policy (Godhe, 2019). The definition of literacy proposed by Lozano (2019) includes the development of skills and abilities that enable the acquisition of various information through digital platforms, especially the ability to collect, analyze, report, or transmit data. In this sense, digital literacy is the ability to identify and process extensive information obtained by searching the Internet using computers or other devices, which can lead to the development of cognitive information processing (Díaz, 2023).

In the same way, for Leaning (2019), digital literacy is manifested as the ability to use information technologies, digital resources, and technological devices through the user's knowledge; Similarly, for Área (2015), digital literacy reflects the particular importance of opportunities to improve literacy through the development of computer skills in a variety of technological areas, including personal computers, Internet browsing, and the use of software. Similarly, García (2017) mentioned that digital literacy is the group of attitudes and skills to find, use, and manage information in the most effective way. This includes making complex decisions, solving problems, or being mindful of learning and growing in different areas for personal gain.

In addition, according to Álvarez (2021), digital literacy is a set of skills and knowledge that can be used to find, process, and use information in the most effective way. This is determined by an individual's ability to question decision-making and problem-solving during education or training, this being a key factor in achieving personal gain; finally, Ng (2012) provides a digital literacy model based on three dimensions: i) technical skills, which refers to operational skills in the use of ICTs; ii) cognitive skills, related to the ability to find, evaluate and select important information; and iii) socio-emotional skills related to responsible use of the Internet.

Regarding the variable job performance, Lunardi et al. (2019), the effective functioning of any organization requires that employees not only perform their specific functions, but also develop behaviors that go beyond formal duties, and Ranaweera et al. (2019), job performance includes the activities, behaviors, and developmental outcomes that employees engage in to ensure that they are connected to and contribute to the achievement of the Objectives of the organization's office. Rodríguez et al. (2020) describe the results as effectiveness based on systematic criteria measured by the leader's ability to adapt and develop. For their part, Ribes et al. (2018) show that the quality of the work performed by an employee in their field or task increases the individual's skills and abilities, which in turn translates into the results achieved by the organization (Martín, 2018). The most important thing is to maintain an adequate system, as well as to use the necessary techniques and methods to represent the activities carried out (Fuentes et al., 2019).

Eufrazio (2018) mentions that work performance in a company is proportional to productivity and in this number, Álvarez (2018) considers performance as such to the task of one or more employees as the jobs they perform and the achievement of the objectives established within the organization. According to Argoti (2020), job performance is the value that an individual brings to the company in as many ways as possible within a given period of time to achieve the set goals, therefore, employee performance can be measured independently and watch the performance. Similarly, job performance is the growth and development that employees undertake to achieve organizational goals effectively and efficiently, as measured by skills, knowledge, and attitudes. (Chiavenato, 2011)

In terms of theoretical justification, with a theoretical gap due to a small number of studies or a limited number of studies, these findings allow the development of theoretical concepts on the topic and serve as a basis for future research. In addition, they will receive theoretical support. through information collected from reliable sources such as books, journals, etc., from a methodological aspect, because the scientific research method will be followed, through tools that can be used in future research, in addition, this study also develops the level of

correlation From a quantitative approach, we will focus on the resources to measure variables, guaranteeing valid and reliable results and promoting scientific research. In addition, this research has social importance because it will contribute constructively to society as a whole. The results obtained in this study will provide a perspective for employees in the public and private sectors. In particular, collecting information on the correlation between digital literacy and job performance will provide relevant data to identify key areas to determine higher job performance. Finally, with practical justification, an analysis of the results will be obtained to inform the organization of promotion or prevention programs, as well as the development of innovative strategies aimed at improving adaptability to respond to the current situation by collaborating with digital literacy and the performance of employees.

Thus, the general objective was to determine the impact of digital literacy on the work performance of the employee of a state entity, followed by the specific objectives of measuring the impact of digital literacy on the skills of the employee of a state entity, to know the impact of digital literacy on the knowledge of the employee of a state entity, To identify the impact of digital literacy on the attitudes of the employee of a state entity.

To establish as a general hypothesis: Literacy has a significant impact on the work performance of the employee of a state entity.

**METHODOLOGY**

For the development of the methodology, a methodology with a quantitative approach was developed, since the results will be measured by tables that demonstrate the levels of the variables, as well as inferential statistics will be used to demonstrate the objectives, the design was non-experimental causal correlational of explanatory level because it sought to measure the relationship and tried to explain what is the impact of digital literacy on work performance, Measuring their relationship by observing the variables, it finally had a cross-sectional because the information collected was given based on a pre-defined sample in a certain time. (Hernández et al., 2018)

For the determination and choice of the population, 137 collaborators belonging to a public entity were considered, having as main inclusion criteria administrative personnel, and as criteria of exclusion external personnel, security, cleanliness and medical services, likewise for the sample a census type was established, therefore the total population was chosen as the object of study through non-probabilistic sampling for convenience since We will intentionally select the people we want to participate in our study conducted.

In this way, for the processing of the data, programs such as Microsoft Excel 2020 and the Spss Statistics version 26.0 program were considered, which allowed us to know the levels through descriptive statistics and the impact of one variable on the other through inferential statistics, thus proceeding to determine the frequencies, the normality test, to determine how non-parametric statistical to ordinal logistic regression for the treatment of data within the article.

**RESULTS (DISCUSSION)**

**Descriptive Data**

**Table 1 Digital literacy level**

		f.	(%)
VARIABLE	Digital Literacy	Well	14.6
		Regular	66.4
		Bad boy	19.0
DIMENSIONS	Technical Skills	Well	15.3
		Regular	70.1
		Bad boy	14.6
	Cognitive skills	Well	15.3

*Digital Literacy and its Impact on the Work Performance of the Collaborator of a State Entity*

		Regular	81	59.1
		Bad boy	35	25.5
		Well	23	16.8
	Social-Emotional Skills	Regular	77	56.2
		Bad boy	37	27.0
		Total	137	100.0

*Note.* Excerpted from Spss (2024)

Based on the analysis of table 1, we can mention as the most outstanding data that digital literacy is at a regular level with 66.4%, in the same way for the dimensions technical skills, cognitive skills and socio-emotional skills, we can also find them at a medium level incurring 70.1%, 59.1% and 56.2%. evidencing the media knowledge of digital media for its development of the company

**Table 2 Level of Job Performance**

			f.	(%)
VARIABLE	Job Performance	Optimal	19	13.9
		Intermediate	94	68.6
		Inefficient	24	17.5
DIMENSIONS	Skills	Optimal	25	18.2
		Intermediate	79	57.7
		Inefficient	33	24.1
	Knowledge	Optimal	23	16.8
		Intermediate	96	70.1
		Inefficient	18	13.1
	Attitudes	Optimal	23	16.8
		Intermediate	80	58.4
		Inefficient	34	24.8
		Total	137	100.0

*Note.* Excerpted from Spss (2024)

Similarly, for table 2 it can be mentioned as the most outstanding data that the variable work performance is at an intermediate level with 68.6%, followed by skills also has an intermediate level with 57.7%, the knowledge dimension is also at an intermediate level with 70.1% and finally find the attitudes dimension at an intermediate level with 58.4%.

**Table 3 Data distribution**

	Normality tests		
	Kolmogorov-Smirnova		
	Statistical	Gl	Gis.
Digital Literacy	,115	137	<,001
Job Performance	,100	137	,002

*Note.* Excerpted from Spss (2024)

For the development of the normality test, Kolmogorov-Smirnov was taken, due to the size of the sample, which was greater than 50, followed by the sig. less than 0.05, it is mentioned that the data does not follow a normal distribution, so it was decided to use ordinal logistic regression as a non-parametric method.

**Inferential Results**

**OG:** Determine the impact of digital literacy on the work performance of the employee of a state entity

**Table 4** *Impact of Digital Literacy on Job Performance*

Model tuning information					Pseudo R square	
					Cox and Snell	0.733
Model	Logarit. Likelihood -2	Chi-square	Gl	Gis.		
Intersection only	207.782				Nagelkerke	0.902
Final	26.758	181.024	2	<0.001	Mcfadden	0.789

*Note.* Excerpted from Spss (2024)

Table 4 shows that there is a sig< 0.05, so Ho is rejected and Hg is accepted, mentioning that literacy has a significant impact on the work performance of the employee of a state entity, all supported by the Nagelkerke value of 0.902, determining that digital literacy has an impact of 90.2% on the performance variable; all this coincides with Kwayu et al. (2021) who mention that the correct use of digital technology efficiently influences the development of knowledge, thus facilitating decision-making within the organization, as well as delegation to fulfill the various roles and functions among employees; all this supported by Montero et al. (2020) who establish that digital literacy poses new challenges for various public and private entities, where employees necessarily need to acquire and promote the development of skills to optimize their performance; finally supported by Lores et al. (2019) who clarify that, today, society requires people to have comprehensive knowledge, including IT competencies, to improve productivity and performance in a variety of workspaces

**SO 1:** Measure the impact of digital literacy on the skills of a state entity's employee

**Table 5** *Impact of digital literacy on skills*

Model tuning information					Pseudo R square	
					Cox and Snell	0.487
Model	Logarit. Likelihood -2	Chi-square	Gl	Gis.		
Intersection only	122.759				Nagelkerke	0.568
Final	31.391	91.368	2	<0.001	Mcfadden	0.344

*Note.* Excerpted from Spss (2024)

For this table, it is possible to visualize that there is a sig.< 0.05, so H1 is confirmed by mentioning that literacy has a significant impact on the skills of the collaborator of a state entity, all supported by the Nagelkerke value of 0.568, determining that digital literacy has an impact of 56.8% on skills; all of this is supported (Oseda et al., 2021) who assume that this is the ideal activity to promote the development of aptitudes and skills required by public servants, promoting characteristics such as: location, identification, storage, and processing of information digitally, followed by Lozano (2019) who establishes digital literacy as the development of skills and abilities that enable the acquisition of diverse information through digital platforms; finally supported by Area (2015) who reflects the particular importance of opportunities to improve literacy through the development of computer skills in a variety of technological areas

**SO 2:** To know the impact of digital literacy on the knowledge of the employee of a state entity

**Table 6** *Impact of digital literacy on knowledge*

Model tuning information					Pseudo R square	
Model	Logarit. Likelihood -2	Chi-square	Gl	Gis.	Cox and Snell	0.526
Intersection only	113.411				Nagelkerke	0.655
Final	10.995	102.415	2	<0.001	Mcfadden	0.458

Note. Retrieved from Spss (2024)

In the same way, it is possible to visualize that there is a sig.< 0.05, so the Ho is rejected and the Hg is accepted, mentioning that literacy has a significant impact on the knowledge of the collaborator of a state entity, all supported by the Nagelkerke value of 0.655, determining that digital literacy has an impact of 65.5% on knowledge; this is supported by Leaning (2019) who tells us that digital literacy manifests itself as the ability to use information technologies, digital resources and technological devices through the user's knowledge; supported by Álvarez (2021), who mentions that digital literacy is a set of skills and knowledge that can be used to find, process, and use information in the most effective way.

**SO 3:** Identify the impact of digital literacy on the attitudes of the employee of a state entity

**Table 7 Impact of digital literacy on attitudes**

Model tuning information					Pseudo R square	
Model	Logarit. Likelihood -2	Chi-square	Gl	Gis.	Cox and Snell	0.556
Intersection only	133.519				Nagelkerke	0.651
Final	22.315	111.204	2	<0.001	Mcfadden	0.423

Note. Retrieved from Spss (2024)

Finally, based on the visualization of Table 7, it is possible to find that under a sig.<0.001 being less than 0.05, H3 is accepted, which mentions that literacy has a significant impact on the attitudes of the collaborator of a state entity, all supported by the Nagelkerke value of 0.651. determining that digital literacy has an impact of 65.1% on attitudes; this is supported by García (2017) who mentioned that digital literacy is the group of attitudes and skills to find, use and manage information in the most effective way. This includes making complex decisions, solving problems, or being aware of learning and growing in different areas for personal benefit, and supported by (Oseda et al., 2021) who mention that this activity is ideal for promoting the development of attitudes, aptitudes, and skills required by public servants

**CONCLUSION**

As a conclusion, it can be indicated that the digital literacy variable was found at a regular level with 66.4% and the variable work performance at an intermediate level with 68.6%, emphasizing the low predisposition to promote interest in the use of digital media as an ideal factor for the performance of the collaborator within the various public entities.

Likewise, under a sig. less than 0.05 it is possible to accept the general hypothesis which indicates that digital literacy significantly impacts the work performance of the employee of a state entity, mentioning under the Nagelkerke value that the Independent variable impacts 90.2% on the dependent variable, followed by this it was also verified based on the specific objectives, that all under a sig.<0.05 it is possible to accept the alternative hypotheses which mention that digital literacy significantly impacts the skills, knowledge and attitudes of the collaborator of a state entity, mentioning under the Nagelkerke value that the impact of literacy on the dimensions of work performance is 56.8%, 65.5% and 65.1% respectively.

As a final conclusion, the importance of establishing adequate digital literacy for the employee is mentioned in order to be able to generate such knowledge, attitudes and skills that promote the development of the employee both outside and inside the institution, enhancing their capabilities and allowing optimal work performance

## **Recommendation**

As a recommendation, it is proposed to establish digital literacy programs in order to provide knowledge about the correct use and use of digital media, in order to maintain better results within the organization, it is also believed necessary to establish better control over KPIs in order to verify performance within the organization, allowing better control and eradicating possible problems immediately.

## **REFERENCES**

- Altamirano, S. (2021). Media literacy profile of higher education students and teachers. CPU-e, Journal of Educational Research, (32), 88-110. <https://doi.org/10.25009/cpue.v0i32.2735>
- Álvarez, B. Porraspita, D. A., & Indacochea, B. (2018). Work performance: a social problem of science. *Didasc@ lia: Didactics and Education*, 9(2), 147-158. <https://dialnet.unirioja.es/servlet/articulo?codigo=6596591>
- Álvarez, J. (2021). Digital literacy in the development of information processing skills in university students. Digital literacy in the development of information processing capacities in university students *Ciencia Latina Revista Científica Multidisciplinar*, 5(4), 6280-6295. [https://doi.org/10.37811/cl\\_rcm.v5i4.771](https://doi.org/10.37811/cl_rcm.v5i4.771)
- Area, M. (2015). Digital literacy and the formation of citizenship in the twenty-first century. *Integra Educativa Magazine*, 7(3), 21-33. [http://www.scielo.org.bo/scielo.php?script=sci\\_abstract&pid=S1997-40432014000300002&lng=es&nrm=iso&tlng=es](http://www.scielo.org.bo/scielo.php?script=sci_abstract&pid=S1997-40432014000300002&lng=es&nrm=iso&tlng=es).
- Argoti, E. (2020). Relationship of emotional intelligence with work performance. *Science & Health*, 3(11), 41-46. <http://revistas.usc.edu.co/index.php/CienciaySalud/article/view/505>
- Díaz, M. (2023) Digital literacy: The challenge of "Access to Knowledge (A2K)" for the Network Society. *Chasqui. Latin American Journal of Communication* No. 151, pp. 199-217 <https://dialnet.unirioja.es/servlet/articulo?codigo=8822180>
- Eufrazio, B. (2018). Work performance and user satisfaction in the veterinary company San Mateo S.A.C. district of Carabayllo, year 2017. César Vallejo University. <https://hdl.handle.net/20.500.12692/15208>
- Fuentes, D., Chapis, E., & Chapis, E. (2019). Human resources management. *University and Society*, 9(2), 313-318.
- García, R. & Pérez, A. (2021). Teachers' digital competence as a key to strengthening the responsible use of the Internet. *Virtual Campuses*, 10(1), 59-71. <https://dialnet.unirioja.es/servlet/articulo?codigo=8017588>
- García, S. (2017a). Digital Literacy. Reason and Word, 21, 66-81. <https://bit.ly/3yKVueD>.
- García, S. (2017b). Digital Literacy. Digital Literacy. Digital literacy. New Scenarios of Educational Communication. Reason and Word, 21(3\_98), 66-81 <https://www.redalyc.org/pdf/1995/199553113006.pdf>
- Godhe, A. (2019). Digital Literacies or Digital Competence: Conceptualizations in Nordic Curricula. *Media and Communication*, 7(2), 25-35. <https://doi.org/10.17645/mac.v7i2.1888>.
- Kwayu, S., Abubakre, M. and Lal, B. (2021), The influence of informal social media practices on knowledge sharing and work processes within organizations. *International Journal of Information Management*, Vol. 58, p. 102280.
- Leaning, M. (2019). An Approach to Digital Literacy through the Integration of Media and Information Literacy. *Media and Communication*, 7(2), 4-13. <https://doi.org/10.17645/mac.v7i2.1931>.
- Lores, B., Sánchez, P., García, M. (2019). The training of digital competence in teachers. *Teaching staff. Journal of Curriculum and Teacher Training*, 23(4), 235-270. <https://digibug.ugr.es/bitstream/handle/10481/60654/11720-34576-1PB.pdf?sequence=1&isAllowed=y>
- Lozano, C. (2019). Digital literacy in the formation of citizenship skills in basic primary. *Eleuthera*, 20, 35-54. <https://doi.org/10.17151/eleu.2019.20.3>
- Lunardi, M. A., Costa, V., & Nascimento, J. C. (2019). Effects of job involvement, managerial attitudes, and information sharing on controllers' performance in the budgetary context. *Revista Brasileira de Gestao de Negocios Review of Business Management*, 21, 540-562. <https://doi.org/10.7819/rbgn.v21i3.4000>
- Martín, P. (2018). *Teleworking and electronic commerce* [Madrid: Ministry of Education, Culture and Sport, 2018]. Permalink: <http://digital.casalini.it/9788436958379>
- Milenkova, V. (2021). Digital Citizenship and Digital Literacy in the Conditions of Social Crisis. *Computers*, 10(4), 40. <https://doi.org/10.3390/computers10040040>.
- Montero, J., Merino, F., Monte, E., Avila, J. & Cépeda, J. (2020). Key digital competences of healthcare professionals. *Medical Education*, 21(5), 338-344.
- Ng, Wan (2012), "Can We Teach Digital Natives Digital Literacy?", *Computer & Education*, vol. 59, no. 3, pp. 1065-1078
- Oseña, D., Lavado, Carmen., Chang, J., & Carhuachuco, E. (2021). Digital competencies and research skills in students of a Public University of Lima. *Revista Conrado*, 17(81), 450-455. [http://scielo.sld.cu/scielo.php?script=sci\\_abstract&pid=S1990-86442021000400450](http://scielo.sld.cu/scielo.php?script=sci_abstract&pid=S1990-86442021000400450)

*Digital Literacy and its Impact on the Work Performance of the Collaborator of a State Entity*

- Ranaweera, C., Office, C., & Dharmasiri, A. (2019). Generation Y and Their Job Performance. ResearchGate, 21(January), 39–82. Retrieved from [https://www.researchgate.net/publication/330358965\\_Generation\\_Y\\_and\\_Their\\_Job\\_Performance](https://www.researchgate.net/publication/330358965_Generation_Y_and_Their_Job_Performance)
- Ribes, G., Perelló, M. R., & Herrero, A. (2018). Human resources management. People management. Academic Collection.
- Rodríguez-Marulanda, K. P., & Lechuga-Cardozo, J. I. (2020). Work performance of the teachers of the ITSA University Institution. *Journal of the School of Business Administration*, 87, 79-101. <https://doi.org/10.21158/01208160.n87.2019.2452>