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DIGITAL TRANSFORMATION IN THE PERFORMANCE OF UNIVERSITY PROFESSORS AT A UNIVERSITY OF ICA

Yrma Rosa Godoy Pereyra, Fernando Alberto Eugenio Guerrero Salazar, Ericka Janet Villamares Hernández, Esther Jesús Vilca Perales, Diana Rocío Ormeño Arguedas, Quintin Checnes Cayampi

Universidad Nacional San Luis Gonzaga, Perú, *Email:* yrma.godoy@unica.edu.pe,
ORCID: https://orcid.org/0000-0002-3651-1182
Universidad Nacional San Luis Gonzaga, Perú, *Email:* fernando.guerrero@unica.edu.pe,
ORCID: https://orcid.org/0000-0003-2531-2628
Universidad Nacional San Luis Gonzaga, Perú, *Email:* ericka.villamares@unica.edu.pe,
ORCID: https://orcid.org/0000-0002-8702-1503
Universidad Nacional San Luis Gonzaga, Perú, *Email:* evilca@unica.edu.pe,
ORCID: https://orcid.org/0000-0003-2117-4344
Universidad Nacional San Luis Gonzaga, Perú, *Email:* diana.ormeno@unica.edu.pe,
ORCID: https://orcid.org/0000-0001-9730-8420
Universidad Nacional San Luis Gonzaga, Perú, *Email:* quintín.checnes@unica.edu.pe,
ORCID: https://orcid.org/0000-0003-0279-6797

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Corresponding author: yrma.godoy@unica.edu.pe

ABSTRACT

The goal of this study was to examine how digital transformation affects teachers' performance at a public university in the Ica region during the year 2024. Because educational environments are changing quickly due to digital technologies, it's important to understand how these tools affect teaching. To do this, a study was developed using a quantitative approach, an applied type, a non-experimental design, and a correlational scope of causal type. The population was made up of 225 teachers from different faculties. The findings show that using digital technologies has helped improve important parts of teaching work, like professional knowledge, attitudes, and behaviours. Digital transformation is a key factor in improving how well people work at universities.

KEYWORDS: information and communication technologies, technological innovation, digital education, work performance, productivity.

1. INTRODUCTION

In higher education, digital transformation isn't just an option anymore—it's a key part of how schools operate, how they teach, and what their teachers need to know. This process, which increased in intensity after the health emergency caused by the novel coronavirus (nCoV), has shown the urgent need to improve teachers' digital skills as a key part of their job performance in hybrid or virtual environments (Cabero et al., 2020).

Digital transformation is a revolution based on data and digital technologies (Chinkes & Julien, 2019). In this revolution, the use of the Internet and technological devices is constantly changing. This forces organizations, including educational institutions, to adapt to these new dynamics (Cueva, 2022). Digital transformation is already a worldwide trend. It's not just happening in companies, but also in schools and universities. Science and technology are becoming more and more important in our lives and schools. So, it's very important for teachers to know how to use digital tools (Guanilo et al., 2022).

Universities have to deal with problems related to the cloud, artificial intelligence, and robotics. These problems affect the job market and schools. To stay important, universities have to change to keep up with these changes (Fleaca et al., 2022). According to data from the Inter-American Development Bank (IDB, 2021), Latin America and the Caribbean have seen significant progress in hybrid models (79%), personalized learning (68%), and artificial intelligence and automation (39%). Angolan public universities face similar challenges, especially with technology and teacher training. They want to meet international standards like those in Japan, Germany, or the United States (Faustino et al., 2022).

New studies show that digital transformation is more than just using technology. It's a big change in how we teach, what we believe, and how we organize. To develop digital skills, we need to have strong ways to assess these skills, have professional teachers help, and create groups where people can work together to integrate these skills over time (De Giusti, 2023; Tito-Huamani et al., 2022). In addition, it is essential for schools to have a clear plan that combines technology, innovation, inclusion, and making education more equal for all students (EDUTIC, 2024).

Some writers agree that the success of digital transformation in higher education depends on how well schools can create learning environments that are flexible, accessible, and focused on students. They also believe that teachers need to be empowered as agents of digital change. This means that we need to see technology not just as a tool, but as something that can help us think critically, work together, and create knowledge.However, there are still big differences between states. In countries like Peru, it's taking longer to fully understand and embrace digital transformation in universities (Caro, 2018). Recent policies, such as Legislative Decree No. 1496 (SUNEDU, 2020), have forced colleges and universities to use tools that allow them to update the digital skills of their teachers. In fact, the Peruvian Ministry of Education (MINEDU, 2021) has said that digital transformation has grown since the pandemic to all public and private areas, including universities.

In this sense, teachers' digital competence (CDD)—understood as the ability to effectively and critically integrate digital technologies into educational practice—is essential for assessing professional performance in digital environments (Redecker, 2017; Gisbert-Cervera, González & Esteve-Mon, 2021). Research shows that teachers' digital skills directly impact planning, creating new methods, communicating with students, and assessing learning (Marcelo & Yot-Domínguez, 2021; Salinas, 2021). Research like that of Cabero-Almenara et al. (2020) has found that teachers' self-perception and their actual performance are sometimes different. This shows the need for continuous training, support from schools, and objective evaluation. This study looks at how digital transformation affects the work performance of university professors at a public school in southern Peru. It uses math and tools that have been shown to work. The goal of this research is to provide specific evidence that can help improve the rules for teacher training in digital educational environments.

METHODOLOGY

The present research was developed using a quantitative approach, with a non-experimental design and correlational scope. This approach was chosen because it allowed the relationship between digital transformation and the work performance of university professors to be analyzed without manipulating the variables. The study collected data at one time, which is called a "cross-sectional study." The research is considered "applied" because it tries to solve a specific problem in education and create knowledge that can be used to improve schools. The group was made up of 153 professors from a public university in the Ica region. From this group, 110 teachers were chosen using a special sampling method that made sure the sample was a good representation of the whole group based on their fields and teaching experience. To collect information, two Likert-type questionnaires were created and checked for accuracy: one to measure the level of digital transformation in teaching practice and the other to evaluate work performance. Both instruments

were checked by experts and tested in a pilot study to see how reliable they were. The instruments passed this test, with values higher than 0.80 in both scales, which shows that they are reliable. We used SPSS statistical software, version 25, to analyze the data. Descriptive (mean, standard deviation) and correlational statistics were applied, using Spearman's correlation coefficient, since the variables did not present a normal distribution. This approach allowed for a thorough examination of the connection between digital transformation and job performance, providing a solid foundation for the study's conclusions.

RESULTS

The statistical description of the Digital Transformation variable, which is the independent variable of the study, is presented below, as well as its three associated dimensions: technology, innovation, and educational transformation. This categorization was based on the results of a survey of 68 teachers from a public university in Ica in 2024. The results were organized into three categories: low, fair, and optimal. This allowed us to understand how the university's academic environment perceives its digital transformation.

Table 1. Description of the digital transformation variable and its dimensions

Ranks/Levels	Low		Regular		Optimal		Total	
Variables and dimensions	F	%	F	%	F	%	F	%
Digital transformation	20	30	42	61	6	9	68	100
D1: Technology	17	25	38	56	13	19	68	100
D2: Innovation	38	56	27	40	3	4	68	100
D3: Educational transformation	23	34	33	48	12	18	68	100

Note: Data extracted from the SPSS V26 application

Table 1 shows that 61% of teachers think the digital transformation is at a regular level, 30% think it is low and 9% think it is optimal. Regarding the technology aspect, 56% of respondents said it was at a regular level, 25% said it was at a low level, and 19% said it was at an optimal level. When it comes to the innovation aspect, most people have negative views. 56% of people think it is at a low level, 40% think it is average and only 4% think it is at an optimal level. Finally, when it comes to how things are changing in the world of education, 48% of teachers say things are just about right, 34% say things are not very good and 18% say things are great.

Table 2. Description of the variable work performance and its dimensions

Ranks/Levels	Low		Regular		Optimal		Total	
Variables and dimensions	F	%	F	%	F	%	F	%
Job Performance	20	30	43	63	5	7	68	100
D1 Knowledge	21	31	40	59	7	10	68	100
D2: Attitudes	22	32	30	44	16	24	68	100
D3: Behaviours	27	54	27	40	4	6	68	100

Note: Data extracted from the SPSS V26 application

Looking at the data in Table 2, it's clear that 63% of the teachers feel their work performance is just average. Meanwhile, 30% think it's below average, and only 7% consider it above average. Regarding the knowledge dimension, 59% of those surveyed thought it was fair, 31% thought it was low, and 10% thought it was optimal. Regarding the dimension of attitudes, 44% report a regular level, 32% a low level, and 24% consider it to be at an optimal level. Finally, when it comes to behaviors, 54% of teachers say it's at a low level, 40% think it's fair, and only 6% think it's optimal.

Hypothesis testing

To figure out if digital transformation has a big impact on how well university teachers do their jobs, we did a test. The chance of getting the right answer was 95 out of 100, and the margin of error was 5 out of 100 (α = 0.05). The decision rule is as follows: if the p-value is less than 0.05, the null hypothesis is rejected. Otherwise, the alternative hypothesis is rejected. The null hypothesis (Ho) states that *digital transformation does not influence the work performance of teachers* at a public university in Ica, while the general hypothesis (Hg) maintains that *there is a significant influence*.

Table 3. Model fit and R-squared information that explains the influence of

Model	-2 Log of Verisimilitude	Chi-square	G 1	Gis.	Pseudo R square	
Intersection only	69,102				Cox and Snell	,660
Final	10,133	58,969	2	,000	Nagelkerke	,703
					Mcfadden	,498

Note: Data extracted from the SPSS V26 application

The results of the statistical analysis using the logistic regression model are shown in Table 3. The result was p = 0.000, which is lower than the established level of significance (α = 0.05). Therefore, the null hypothesis — the idea that there is no difference — is rejected and the general hypothesis — the idea that there is a difference — is accepted. This means that the digital transformation has a significant impact on the work performance of the teachers evaluated. The pseudo-R-squared coefficients also support this conclusion. The Cox and Snell index was 0.660, while the Nagelkerke index reached a value of 0.703. This means that the model explains about 70% of the differences in how well teachers do their jobs. The McFadden value (0.498) also suggests that the model fits well.

Table 4. Model goodness of fit

	Chi-square	Gl	Gis
Pearson	,018	2	**,991**
Deviation	,035	2	,983

Note: Data extracted from the SPSS V26 application

After the regression model is built, it is important to show how well the values predicted by the model match the actual values. The results showed that deviation (X2 = 0.991) was significant at the 0.05 level. This means that the regression model that looks at how digital transformation affects work performance is valid and acceptable.

Table 5. Estimates of the parameters regarding digital transformation in work performance

							95% confidence interval	
		Estimate	Typo error.	Wald	Gl	Gis.	Lower limit	Upper limit
Threshold	[Rango_TD = 1]	-7,013	1,440	23,721	1	,000	-9,834	-4,191
	[Rango_TD = 2]	-1,387	1,118	1,539	1	,215	-3,579	,804
Location	[Rango_DL=1]	-8,748	1,570	31,055	1	,000	-11,825	-5,671
	[Rango_DL=2]	-4,416	1,332	10,997	1	,001	-7,027	-1,806
	[Rango_DL=3]	0a	.	.	0	.	.	.

Note: Data extracted from the SPSS V26 application

Table 5 shows that the digital transformation of the first rank has a big negative effect on job performance. The estimate was -7.013 (p < 0.001). This means that the more digital transformation there is in this range, the lower the job performance. The effect of the second digital transformation range is not significant (p = 0.215), suggesting that in this range, digital transformation does not have a significant impact on job performance. Both types of digital transformation have a big negative effect on how well jobs are done. They estimate that it goes from -8,748 to -4,416. This shows that the more digital transformation there is, the worse the jobs get.

Specific Hypothesis Test 1

The analysis for specific hypothesis 1 was used to find out if the digital transformation had a big impact on the knowledge of the teachers at a public university in Ica during the year 2024. To do this, we used a logistic regression model. The results of this model are shown in Table 6. As the table shows, the model was statistically significant. The Chi-square value was 27.624, and the p-value was 0.000. This value is lower than the critical level (α = 0.05). Because of this, we can reject the null hypothesis and accept the alternative hypothesis. This allows us to conclude that the digital transformation significantly influences teachers' knowledge.

The values of the pseudo R-squared, shown in Table 6, also support this conclusion. Specifically, the Nagelkerke coefficient was 0.405, which means that about 40.5% of the differences in knowledge can be explained by the level of digital transformation. This proportion shows a medium level of relationship between the two variables, which supports the proposed model.

Table 6. Model fit and R-squared information that explains the influence of

Model	-2 Log of Verisimilitude	Chi-square	G l	Gis.	Pseudo R square	
Intersection only	40,405				Cox and Snell	,403
Final	12,781	27,624	2	,000	Nagelkerke	,405
					Mcfadden	,238

Note: Data extracted from the SPSS V26 application

To check how well the model fit, goodness-of-fit tests were used. The results of these tests are in Table 7. The Pearson test (p = 0.886) and the deviation test (p = 0.767) both have significance values greater than 0.05. This means that there are no significant differences between the observed values and the estimated values from the model. This confirms that the model is a good fit and that the model is valid for interpreting the parameters.

Table 7. Model goodness of fit

	Chi-square	Gl	Gis
Pearson	,288	2	,886
Deviation	,529	2	,767

Note: Data extracted from the SPSS V26 application

Finally, Table 8 shows the estimates of the coefficients of the model. These estimates allow us to analyze the specific effect of the different ranges of digital transformation on knowledge. The first level of digital transformation (the lowest level) has a significant negative effect, with a score of -4.123 and a p-value less than 0.001. This means that low levels of digital transformation are associated with lower levels of knowledge. The second level (intermediate) did not show a significant impact of digital transformation on teacher knowledge (p = 0.740). This suggests that at this level, digital transformation does not have a considerable impact on teacher knowledge.

Table 8. Estimates of the parameters regarding digital transformation in knowledge

		Estimate	Typo error.	Wald	Gl	Gis.	95% confidence interval	
							Lower limit	Upper limit
Threshold	[Rango_TD = 1]	-4,123	1,002	16,924	1	,000	-6,087	-2,159
	[Rango_TD = 2]	,251	,755	,110	1	,740	-1,229	1,730
Location	[Rango_DL_Conocimiento=1]	-4,825	1,100	19,236	1	,000	-6,982	-2,669
	[Rango_DL_Conocimiento=2]	-2,347	,953	6,065	1	,014	-4,214	-,479
	[Rango_DL_Conocimiento=3]	0a	.	.	0	.	.	.

Note: Data extracted from the SPSS V26 application

The results in Tables 6, 7, and 8 show that digital transformation has a big impact on what university teachers know, especially in places where the internet and technology aren't very common. In these places, the negative effects are more noticeable.

Specific Hypothesis Test 2

To test specific hypothesis 2, it was suggested to find out if digital transformation has a big impact on the attitudes of teachers at a public university in Ica during the year 2024. To this end, the following idea was formed: The digital transformation does not change teachers' attitudes. But it does have an effect on teachers' attitudes. As shown in Table 9, the logistic regression model was statistically significant. The chi-square value was 89.697, and the significance level was p = 0.000, which is lower than the established threshold of α = 0.05. Therefore, the null hypothesis—the idea that there is no relationship between digital transformation and teachers' attitudes—is rejected. Instead, the alternative hypothesis—the idea that there is a significant influence of digital transformation on teachers' attitudes—is accepted. This result is supported by the high value of Nagelkerke's pseudo-square R, which reached 0.888. This indicates that the model explains about 88.8% of the variation in teachers' attitudes based on the level of digital transformation. This percentage shows a strong relationship between both variables, meaning the model explains the data well.

Table 9. Model fit and R-squared information that explains the influence of

Model	-2 Log of Verisimilitude	Chi-square	Gl	Gis.	Pseudo R square	
Intersection only	89,697				Cox and Snell	,758
Final	.000	89,697	2	,000	Nagelkerke	,888
					Mcfadden	,656

Note: Data extracted from the SPSS V26 application

On the other hand, when looking at how well they fit, the results in Table 10 show that both the Pearson test and the deviation test got a significance value of p = 1.000, which is much higher than the threshold of 0.05. This means that the values observed are very similar to the values estimated by the model. This suggests that the model is a good representation of the real data and can accurately predict the effects of the independent variable.

Table 10. Model goodness of fit

	Chi-square	Gl	Gis
Pearson	,000	2	1,000
Deviation	,000	2	1,000

Note: Data extracted from the SPSS V26 application

However, when looking closely at the estimates of the model's parameters in Table 11, it seems that none of the ranges of digital transformation have a significant impact on attitudes. The first range showed a value of p = 0.984, and the second range showed a value of p = 0.323. Both of these values are above the significance threshold. This means that even though the general model is important and can explain a lot, the specific effects of the different levels of digital transformation on attitudes are not statistically significant. In short, the global model seems to fit well and is significant. This suggests that the digital transformation influences teachers' attitudes. However, the individual coefficients do not show significant effects by rank. This suggests a positive overall relationship between the two variables, but the specific levels of digital transformation do not clearly affect teacher attitudes. In future research, we should explore possible mediating or moderating variables.

Table 11. Estimates of the parameters regarding digital transformation in attitudes

		Estimate	Typo error.	Wa ld	(l	G is.	95% confidence interval	
							Lower limit	Upper limit
Threshold	[Rango_TD = 1]	-34,689	1714,159	,000	1	,984	-3394,379	3325,001
	[Rango_TD = 2]	,511	,516	,979	1	,323	-,501	1,523
Location	[Rango_DL_Actitudes=1]	-36,992	1714,159	,000	1	,983	-3396,682	3322,699
	[Rango_DL_Actitudes=2]	-17,036	1179,708	,000	1	,988	-2329,221	2295,148
	[Rango_DL_Actitudes=3]	0a	.	.	0	.	.	.

Note: Data extracted from the SPSS V26 application

Specific Hypothesis Test 3

In the context of specific hypothesis 3, the objective was to ascertain whether digital transformation exerts a substantial influence on the conduct of educators at a public university in Ica during the year 2024. To this end, the null hypothesis (Ho) was proposed: digital transformation does not influence teachers' behavior, and the alternative hypothesis (H3): digital transformation influences teachers' behavior. As demonstrated in Table 12, the data obtained from the logistic regression model show that it is statistically significant. The resultant chi-square value was 30.415, with 2 degrees of freedom and a significance of p = 0.000, which is lower than the critical level of α = 0.05. Consequently, the null hypothesis is refuted and the alternative hypothesis is substantiated, indicating that digital transformation exerts an influence on teaching behavior. With respect to the explanatory power of the model, Nagelkerke's pseudo-square R attained a value of 0.437, signifying that the model accounts for 43.7% of the variability in teachers' behavior in relation to the extent of digital transformation. The percentage dependence level under consideration reflects a moderate relationship between the two variables, thereby validating the model used.

Table 12. Model fit and R-squared information that explains the influence of

Model	-2 Log of Verisimilitude	Chi-square	G l	Gis.	Pseudo R square	
Intersection only	41,968				Cox and Snell	,510
Final	11,552	30,415	2	,000	Nagelkerke	,437
					Mcfadden	,329

Note: Data extracted from the SPSS V26 application

At the level of goodness of fit, the results presented in Table 13 demonstrate an adequate correspondence between the observed data and the values predicted by the model. The results of the Pearson test (p = 0.878) and the deviation (p = 0.797) both indicate values greater than 0.05, thereby confirming the absence of any statistically significant discrepancies between the observed and estimated frequencies. This finding serves to substantiate the validity of the proposed regression model.

Table 13. ***Model goodness of fit***

	Chi-square	Gl	Gis
Pearson	,260	2	,878
Deviation	,453	2	,797

Note: Data extracted from the SPSS V26 application

However, an analysis of the estimates of the parameters reported in Table 14 reveals that the effects of the varying ranges of digital transformation on teacher behavior are not uniform. The initial range of digital transformation demonstrates a substantial negative impact (estimate = -5.288; p < 0.001), suggesting that minimal digital transformation is correlated with reduced levels of desired teaching practices. In contrast, the second range is not significant (p = 0.992). This finding suggests that at this level, digital transformation does not have a statistically relevant effect on behavior. Similarly, an examination of the values corresponding to the levels of teaching behavior reveals negative effects in the first two levels. The first rank is highly significant (p < 0.001), while the second has marginal significance (p = 0.110), insufficient to be considered conclusive.

In summary, the results indicate that, although the global model allows us to affirm that digital transformation influences teachers' behavior, the specific impact varies according to the level of digital transformation. The most salient effect manifests at the lowest levels, where constrained digital transformation is correlated with diminished teacher behavioral performance. This situation underscores the necessity of enhancing digital competencies as a strategy to refine professional conduct within the educational sector.

Table 14. ***Estimates of the parameters regarding digital transformation in*** **behavior**

		Estimate	Typo error.	Wald	G l	Gis.	95% confidence interval	
							Lower limit	Upper limit
Threshold	[Rango_TD = 1]	-5,288	1,458	13,151	1	,000	-8,146	-2,430
	[Rango_TD = 2]	-,010	,998	,000	1	,992	-1,965	1,945

Location	[Rango_DL_Comportamiento=1]	-5,351	1,488	12,939	1	,000	-8,267	-2,436
	[Rango_DL_Comportamiento=2]	-1,810	1,134	2,549	1	,110	-4,032	,412
	[Rango_DL_Comportamiento=3]	0a	.	.	0	.	.	.

Note: Data extracted from the SPSS V26 application

As illustrated in Table 14, the digital transformation of the first rank exerts a substantial negative influence on behavior, as evidenced by the estimated value of -5.288, which is statistically significant at the $p < 0.001$ level. This finding suggests a negative relationship between the extent of digital transformation and behavioral outcomes, indicating that as the degree of digital transformation increases, behavioral performance tends to decrease. The impact of the second digital transformation range is deemed to be negligible ($p = 0.992$), thereby indicating that within this range, digital transformation does not exert a substantial influence on behavior. The findings of this study indicate that both ranges of digital transformation development have significant negative effects on teacher behavior. In particular, the results suggest that as levels of digital transformation development increase, teachers' behavior becomes less optimal.

The results of the study demonstrate that digital transformation is impacting the educational environment by enhancing access to educational resources, facilitating communication between teachers and students, and personalizing learning. The degree to which teachers are prepared and willing to adopt and adapt to these technologies is a critical factor in determining their work performance and the continuous improvement of educational excellence.

DISCUSSION

The findings of this study corroborate the notion that digital transformation exerts a substantial influence on the work performance of university teachers, a conclusion that is consistent with the recent scientific literature on the subject. A notable finding was the correlation between lower levels of digital development and diminished teacher performance, particularly in terms of knowledge and behaviors. This observation serves to underscore the imperative for enhancing digital competencies within the higher education sector.

In accordance with these findings, the study by Esteve-Mon et al. (2023) emphasizes that teachers' digital competence should not be perceived as a mere technical skill, but rather as an integral dimension that exerts a direct influence on educational quality and institutional transformation. From this perspective, the observed deficiencies in digital competence among some teachers may be attributable to an institutional culture that is not adequately aligned with the evolving digital landscape or to inadequate training processes. Furthermore, the article emphasizes that the most innovative university environments are those that promote the critical and reflective pedagogical use of technology. This coincides with the recommendation of this study on the need to invest in contextualized training.

Conversely, the article published by Díaz Barriga et al. (2023) asserts that resistance to change, inadequate digital literacy, and deficient technological infrastructure collectively constitute substantial impediments to the establishment of sustainable digital transformation processes. In this sense, the significant proportion of teachers who evaluate their level of digital transformation and work performance as "regular" may be indicative of these structural barriers, particularly in public universities. This study's findings align with our own, emphasizing that an educator's stance toward technology does not invariably translate into effective practices. This assertion is substantiated by the present work's inability to identify substantial impacts on the attitudinal dimension, notwithstanding the global model's perceived significance.

The findings align with the conclusions reported by Martín-Párraga, Llorente-Cejudo, and Barroso-Osuna (2023), who, in a study conducted at a Peruvian university, determined a substantial correlation between educators' digital competence levels and their professional effectiveness. The authors of the study posit that the integration of ICTs has the potential to transform the pedagogical practices, pedagogical planning, evaluation processes, and classroom management techniques that are directly associated with the dimensions that have been examined in this study. Furthermore, the data obtained in this study suggest a negative correlation between low levels of digital transformation and teacher performance, particularly in the domains

of knowledge and behaviors. This pattern was also identified by De Giusti (2023), who, through a systematic review, demonstrated that teachers with limited digital competence tend to exhibit resistance to educational innovation and encounter greater challenges in integrating technological tools into their pedagogical practice. The author further contends that initiatives to equip educators with digital competencies should be accorded a high priority, with the objective of mitigating these disparities and amplifying the efficacy of digital transformation within educational settings.

In a similar vein, the document by Cabero-Almenara et al. (2020), accessible on Dialnet, underscores the pivotal relationship between teachers' digital competence and their capacity for methodological innovation. It further emphasizes the transformative nature of these innovations in shaping teachers' roles as guides in virtual and hybrid environments. This finding aligns with the observation that the innovation dimension received the lowest ratings in our sample (56% at low level), indicating a substantial constraint in the implementation of disruptive pedagogical practices facilitated by technology. As the authors emphasize, continuous professional development and the integration of ICTs into curricula are imperative to transition from an instrumental use of technology to a genuinely transformative one.

The findings of these three studies indicate that there is a general level of digital transformation, yet only 9% of respondents perceive it as optimal. These findings partially coincide with those reported by De Giusti (2023), who points out that digital transformation in higher education is still in a transition stage in many Latin American universities, characterized by a functional rather than strategic use of technologies. However, the percentage of low perception (30%) identified in this study reveals a more pronounced gap compared to what is evidenced in institutions with a longer history of technological innovation.

With respect to the innovation dimension, the present study identified that 56% of teachers perceive a low level, which is a matter of concern. This perception stands in contrast to the findings reported by Viñoles et al. (2022), who observed higher levels of innovative appropriation of technologies among teachers who have participated in institutional digital training programs. This discrepancy indicates the potential for constraints in the availability of training and pedagogical support that could impede innovation within the context of the public university under scrutiny.

With respect to work performance, 63% of the teachers evaluated reported a regular level of performance. However, the behavioral dimension exhibited the most critical percentages, with 54% at a low level. This finding aligns with the assertions put forth by Bartolomé and Grané (2021), who contend that the pursuit of digital transformation, absent a concomitant emphasis on profound pedagogical reform, often culminates in a mere instrumental utilization of technology, failing to engender notable advancements in pedagogical practice. Notwithstanding this finding, the present study demonstrates that digital transformation exerts a substantial influence on work performance, as evidenced by a Nagelkerke pseudo-R-square of 0.703 and a p-value < 0.001, thereby substantiating the prevailing hypothesis.

With respect to the specific hypotheses, digital transformation exhibited a substantial influence on teachers' knowledge, a finding that aligns with the observations of Mejía and Mejía (2022). These researchers emphasize that digitalization fosters the updating of knowledge and the diversification of information sources. However, in this study, the lowest range of digital transformation presented a significant negative estimate (-4.123, $p < 0.001$), which indicates that reduced levels of digitalization are associated with lower knowledge, which reaffirms the need to strengthen digital competencies from formative stages. In the attitude dimension, while the global model demonstrated statistical significance ($p < 0.001$), the specific ranges did not exhibit statistical significance. This apparent contradiction can be explained in the light of what was pointed out by Sosa and Valverde (2020), who found that many teachers manifest positive attitudes towards ICTs, but these do not always translate into concrete actions. This finding serves to reinforce the notion that attitudinal change necessitates more than mere technological exposure; rather, it is an intricate process involving introspection, guidance, and formal acknowledgment from institutional entities. In the behavioral dimension, digital

transformation exhibited a substantial influence (Nagelkerke = 0.437), particularly at low levels, where the adverse impact was more pronounced (-5.288, $p < 0.001$). This phenomenon has already been observed by Area and Adell (2022), who emphasize that in the absence of an adequate institutional digital culture, pedagogical practices tend to perpetuate traditional methodologies with novel tools, exhibiting a de facto methodological stagnation.

This study lends further credence to the notion that digital transformation plays a pivotal role in determining the effectiveness of university teachers in their professional endeavors. However, it is evident that the mere presence of technological resources does not guarantee substantial improvements. A coherent articulation between institutional policies, teacher training, pedagogical accompaniment, and continuous evaluation is imperative. As Salinas (2021) asserts, the challenge lies not only in the incorporation of technology, but also in its transformation into a genuine catalyst for educational innovation.

CONCLUSIONS

The findings of this research suggest that digital transformation exerts a significant influence on the work performance of university teachers. Its adequate integration into the academic environment optimizes teaching and learning processes and strengthens teachers' professional competencies by directly influencing their knowledge, attitudes, and behaviours in the classroom. The evidence obtained indicates that educators with access to technological resources, ongoing professional development opportunities, and institutional environments that promote pedagogical innovation demonstrate superior performance in their roles. This transformation, therefore, should not be understood only as an instrumental incorporation of ICT, but as a profound process that impacts teaching work from a structural, pedagogical, and ethical perspective. Consequently, the findings underscore the imperative for educational policies that are designed to fortify a university's digital culture. Such policies are instrumental in establishing the foundations for a sustained and equitable transition towards more flexible and inclusive training models. These models, in turn, are essential for aligning with the demands of the contemporary context. The enhancement of digital transformation through teacher professional development has been demonstrated to have a dual impact: it not only leads to an improvement in educational quality but also contributes to the modernization of higher education institutions.

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