



REVISTA

CÁTEDRA

Influence of digital skills on language competency in university students

Influencia de las habilidades digitales en las competencias lingüísticas en estudiantes universitarios

Dina Inga-Lindo

Universidad Nacional Federico Villarreal, Perú
Escuela de Lingüística y Literatura, Departamento de Humanidades

dinga@unfv.edu.pe

<https://orcid.org/0000-0001-6998-3592>

Evelyn Zavala-Zavala

Universidad Nacional Federico Villarreal, Perú
Escuela de Lingüística y Literatura, Departamento de Humanidades

ezavalaz@unfv.edu.pe

<https://orcid.org/0000-0001-7012-471X>

Joanes Benott-Santander

Universidad Nacional Federico Villarreal, Perú
Escuela de Lingüística y Literatura, Departamento de Humanidades

jbenott@unfv.edu.pe

<https://orcid.org/0000-0002-8211-8234>

(Received on: 08/03/2025; Accepted on: 10/05/2026; Final version received on: 04/07/2026)

Suggested citation: Inga-Lindo, D., Zavala-Zavala, E. y Benott-Santander, J. (2026). Influence of digital skills on language competency in university students. *Revista Cátedra*, 9(2), 63-83.

Abstract

Technology has transformed human life, becoming an integral part of academic, professional, and social life. People use digital media (virtual assistants, social networks, digital platforms) and languages for linguistic communication (oral and written comprehension and expression). However, some educational institutions show little interest in incorporating these technologies into the cognitive process, which limits learning and widens educational gaps. The objective of this study was to determine the influence of digital skills on linguistic competencies in students at the Federico Villarreal National University in 2024. The approach was quantitative, correlational-causal, and non-



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

experimental. The population consisted of 600 students, and the sample comprised 202 students from the first and second semesters. Non-probability sampling was used, and the data collection techniques included surveys and document analysis. The instrument was a scale-type test with the following values: Never (1), Almost Never (2), Sometimes (3), Almost Always (4), Always (5). The results were analyzed using SPSS V29 software, yielding a Pearson correlation coefficient of $r = 0.695$, a significance level of 0.05, and a 95% confidence level, indicating a moderate positive correlation. In conclusion, digital skills significantly influence linguistic competence in students at the Federico Villarreal National University in 2024. The study shows that teachers must know, manage, and apply technological tools to improve linguistic competence, because students come from diverse cultural, social, and academic backgrounds, which hinders the interpretation of abstract ideas or complex concepts.

Keywords

Competencias lingüísticas, comprensión, expresión oral, expresión escrita, habilidades digitales.

Resumen

La tecnología transformó la vida de los seres humanos, porque forman parte de su mundo académico, laboral y social, utilizan medios digitales (asistentes virtuales, redes sociales, plataformas digitales) y lenguajes para la comunicación lingüísticas (comprensión y expresión oral, escrita), sin embargo, algunos entes educativos no tienen interés de emplearlas en el proceso cognitivo, el cual limita al aprendizaje y amplía las brechas educativas. El objetivo del estudio fue determinar la influencia de las habilidades digitales en las competencias lingüísticas en estudiantes de la Universidad Nacional Federico Villarreal, 2024, el enfoque fue cuantitativo, tipo correlacional-causal, diseño no experimental, la población estuvo constituida por 600 discentes y la muestra por 202 que pertenecen al I y II ciclo, se utilizó el muestreo no probabilístico, la técnica fue la encuesta y el análisis documentario, el instrumento un test tipo escala, con valores: Nunca (1), Casi nunca (2), A veces (3), Casi siempre (4), Siempre (5). Los resultados fueron analizados mediante el software SPSS V29, el coeficiente de correlación de Pearson $r=0,695$, nivel de significancia (0.05) de 95% de confiabilidad, determinando una correlación positiva media o moderada. En conclusión, las habilidades digitales influyen significativamente en las competencias lingüísticas en estudiantes de la Universidad Nacional Federico Villarreal, 2024. El estudio muestra que los docentes deben conocer, manejar y aplicar herramientas tecnológicas para mejorar las competencias lingüísticas, porque los estudiantes vienen marcados por la diversidad cultural, social y académica, que dificultan la interpretación de ideas abstractas o conceptos complejos.

Palabras clave

Competencias lingüísticas, comprensión, expresión oral, expresión escrita, habilidades digitales.

1. Introduction

In the 21st century, information and communication technologies (ICTs) have radically transformed human life, facilitating new forms of interaction and access to diverse knowledge, which has significantly influenced education. According to Ancira and Gutiérrez, the use of ICTs in the teaching-learning process translates into greater opportunities to



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

access materials, as well as increased student motivation and productivity, improving their comprehension and performance. However, despite these advances, obstacles persist, such as a lack of access to resources and insufficient teacher training (Ancira and Gutiérrez, 2011). Furthermore, linguistic competencies remain fundamental pillars of university academic training. The ability to understand, interpret, and write effectively is essential in a constantly evolving educational and professional environment. Expressing and arguing requires the use of precise, coherent, appropriate, clear, concise, and concrete language—elements that demand linguistic proficiency, not only for academic performance but also for students' interpersonal interactions in a digital context. According to Area and Pessoa, navigating the knowledge society implies continuous literacy in the use of digital tools and incorporating them as a cross-cutting, interdisciplinary, and indispensable axis in the cognitive process. Immersing oneself in the digital world is not just about knowing platforms, gathering, or selecting information, but about producing, reproducing, and disseminating knowledge, guided by critical, creative, autonomous, and collaborative thinking (Area & Pessoa, 2012).

Including technology in learning plays a crucial role in a globalized, dynamic, and ever-changing education. However, it is recognized that there are negative impacts on the development of linguistic skills; in the oral sphere, the lack of interpersonal interaction and socialization experienced during the pandemic meant that the brain and articulatory organs were not exercised. This effect is evident in the classroom when students are afraid to communicate their ideas or make mistakes when expressing words, sentences, etc. In the written domain, various technological tools (ChatGPT, Gamma, Gemini, etc.) exist to aid academic writing; however, students often copy and paste without analyzing or understanding the text, nor do they respect the language's spelling rules. Regarding reading, there are texts of diverse types, ranging from basic to complex, but disinterest in reading is increasingly widespread because some students have become accustomed to reading out of obligation, without considering that reading benefits every field of human knowledge. According to Macías et al., digital media enhance linguistic competencies and develop communicative skills through oral and written interaction; they can also serve as motivation to increase cognitive level (Macías et al., 2022).

Generation Z demands that educators embrace digitalization to navigate a changing education system. According to the Organisation for Economic Co-operation and Development (OECD), a country's development requires proficiency in information technologies that promote the digital transformation of students. Developing linguistic skills based on grammar, morphology, syntax, phonetics, phonology, semantics, and pragmatics, as well as training students in accordance with the evolution of these disciplines, is a fundamental necessity in today's educational context (OECD, 2019). The goal is to renew traditional techniques and utilize technological and innovative tools for reading comprehension and multimodal writing. Therefore, it is urgent to foster literacy in linguistic competencies and digital skills, which are key to the holistic development of future professionals.

According to Lloyd, digital divides exist, such as the availability of resources, the ability to manage and use technology appropriately, and the fact that not everyone has the conditions or desire to learn, which hinders constructive learning (Lloyd, 2020). In various public universities in Peru, it is observed that traditional methods focused on listening, memorizing, repeating lessons, using outdated books, and standardized tests continue to be used. Based on this, the research question posed was: How do digital skills influence the linguistic competencies of students at the Federico Villarreal National University in 2024?



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

We are aware of the reality of students entering the university; they have deficiencies in reading comprehension, writing, and argumentation of academic texts. Furthermore, not all of them have digital skills or access to electronic devices, connectivity, etc., which limits the student's active participation in constructing their own learning. Finally, social media (Facebook, TikTok, WhatsApp) weakens language practices, hindering and distorting the development of linguistic competencies. Therefore, training should be implemented to incorporate the virtual world into pedagogical activities and curricula. Teaching is not just about delivering information, but about fostering lasting, creative, innovative, and knowledge-sharing learning.

This study is based on enhancing comprehension, oral and written expression through fundamental and instrumental digital skills. Arango and Manrique mention that the virtual environment predominates in education and facilitates the creation of new forms of interaction between knowledge and students (Arango & Manrique, 2023). There is a need to fill gaps in the educational field. The theories cited in this research contribute to the sustainability of the study and future work, including the results, recommendations, and proposals that will be incorporated into education. In practice, this study proposes strategies and techniques to enhance digital skills and linguistic competencies, as well as the application of formative and continuous assessments to observe cognitive processes. The methodology presents structured methods, approaches, and techniques that follow a systematic, authentic, and reliable order. This research is important because it provides a data collection instrument that will be useful for other researchers. Furthermore, it will foster creativity, critical thinking, and independence in student learning.

The overall objective of the research was to determine the influence of digital skills on linguistic competencies in students at the Federico Villarreal National University in 2024. The specific objectives were: a) to determine the influence of digital skills on oral comprehension and expression, and b) to determine the influence of digital skills on written comprehension and expression.

The article is structured as follows: Section 1 presents the abstract and introduction, outlining the problem, objectives, literature review, and its importance in oral and written expression and comprehension; Section 2 outlines the methodology, approach, design, type, population, sample, techniques, and instruments used for data collection; Section 3 presents the results obtained from the applied instrument and interprets them based on the analysis of the tables and figures generated from data processing using SPSSv29 software; Section 4 presents the discussion, contextualizing the results, comparing the study with previous research, and establishing the findings. Finally, a summary or recap of the thematic content, the bibliography, and the authors' contributions are presented.

2. Literature review

2.1 Digital skills

Digital skills encompass the set of knowledge, abilities, and skills related to the use of ICTs, which are developed primarily through experience, continuous practice, and learning processes. These skills are based on broad digital literacy that allows for the effective, critical, and relevant use of technological tools (Jiménez & León, 2024). Furthermore, the authors emphasize that digital skills play a fundamental role in higher education, involving not only mastery of diverse tools and resources in the digital environment but also the ability to leverage them to strengthen teaching and learning processes. In this context, teachers must be prepared to adapt to technological advancements, develop advanced



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

digitalization skills, and effectively integrate ICTs into their pedagogical practice (Jiménez & León, 2024). Saptura indicates that these skills are essential in the 21st century because they allow people to navigate using various devices, where they can manage information and share it about: culture, education, language, the environment, politics, economics, or topics that are relevant in the social context (Saptura, 2021).

2.1.1 Fundamental digital skills

Permite al sujeto conocer y comprender el entorno digital, para poder manipularlo con eficiencia, seguridad, responsabilidad ético-moral. Requiere de la capacidad de cooperación, participación y transformación de los conocimientos básicos en complejos. En el internet existe información por doquier, se evalúa si son fuentes confiables que reflejan la realidad y dar crédito a quien corresponde (evitar el plagio); conocer estas habilidades son esenciales para analizar, construir argumentos, interactuar con otros, crear y editar contenidos en Google Apps, Twitter, Skype, Canva, Genially, Prezi, YouTube, etc., además, implica la flexibilidad en el uso del lenguaje, que puede ser formal (estándar) e informal (coloquial), dependerá del receptor a quien se dirige, empleando los medios tecnológicos que ayudan al universitario a la perfección académica, personal y social, Morduchowicz, define que las personas necesitan conocer las habilidades digitales fundamentales para adquirir saberes basados en el pensamiento crítico, desafiar argumentos, detectar falencias en un contenido temático, todas estas competencias son importantes para la vida cotidiana, la participación activa en la sociedad, acceso a la instrucción, uso de diversas informaciones, desarrollo de la creatividad, desenvolvimiento libre y seguro en el entorno virtual Morduchowicz, 2024).

2.1.2 Instrumental Digital Skills

Practical skills in using devices and platforms encompass specific functions and actions such as: researching information to manage academic activities, using formal language, mastering cognitive processes, analysis and integration, discernment, and questioning. Therefore, teachers and students must strengthen these skills to understand their operation and the challenges posed by the digital world. Morduchowicz mentions that these skills will not promote proficient use of technology if they are not based on critical thinking and an understanding of how virtuality works. For example, creating email for formal communication, using templates to design academic activities, using spreadsheets, managing social media, creating digital presentations, using videoconferencing applications, and utilizing specialized software. Digital literacy and inclusion in education are essential and indispensable; they facilitate open access to information, enable the performance of daily tasks, manage time and work, and allow interaction with the digital universe (Morduchowicz, 2021).

2.2 Linguistic skills

In universities today, students develop the knowledge necessary to understand, interpret, produce, and express oral and written texts. According to Carlino, writing and oral participation require mastery of the language, reasoning, analysis, and argumentation, as well as the use of formal language adapted to diverse registers and communicative contexts. However, students entering higher education face difficulties in analyzing, synthesizing, and evaluating specialized texts, and struggle to complete assignments, essays, reports, critical summaries, research papers, and identify key ideas (Carlino, 2013). According to Serrano et al., mastering linguistic competencies is an important factor in the university setting, especially in the comprehension and production of academic texts (Serrano et al., 2025).



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

Linguistic competencies in the university have evolved; they are no longer conceived as simply correcting grammar, spelling, or intonation, but rather as an integrative concept that allows students to understand, produce, interpret, and use formal, functional, and effective language in academic, professional, and social environments. Next, the dimensions of linguistic competence are conceptualized: reading comprehension, which focuses on interpreting academic, scientific, and technical texts of varying complexity; written production, the ability to draft essays, reports, and articles, ensuring coherence, cohesion, appropriateness, and correctness; oral expression, the ability to communicate ideas with valid and clear arguments that encourage debate and critical thinking; listening comprehension, the ability to understand seminars, lectures, and other presentations; and finally, pragmatic competence, the ability to use language and communicative intent in a given context.

In the university setting, linguistic competence is conceived as multidimensional, integrating communicative, critical, collaborative, and digital skills, all considered fundamental for students' academic and professional development. In this regard, Carlino (2013) points out that these skills are essential for accessing knowledge and actively participating in the academic context, since reading, writing, and argumentation, developed through diverse discourse genres, strengthen the student's intellectual and communicative development (Carlino, 2013).

Regarding oral comprehension and production, according to Padilla et al., the use of oral and written language are tools for representing and interpreting reality. This information is then organized in thought, and finally, ideas are mastered and expressed skillfully and fluently. Education has the function of equipping students with linguistic skills and making them competent speakers. However, to develop these abilities, digital platforms such as Tandem or HelloTalk are necessary. These platforms connect students with native speakers of other languages, facilitate the practice of conversational skills, and allow the use of videos and audio. Gamification and Duolingo contribute to the didactics of learning, making it more attractive, motivating, and even providing practical exercises. Quizzes in learning activities are more dynamic, interactive, and engaging; therefore, it is suggested to research online about virtual tools that enhance language skills, especially written and oral production, as well as to have access to digital libraries and academic databases that allow students to access complex and specialized texts, which will help improve reading and critical comprehension skills (Padilla, et al., 2008).

There is a need to thoroughly analyze the benefits of digital tools that specifically influence language skills in the ever-changing university environment. In this regard, the support of educational institutions is required to learn about and explore diverse strategies and techniques applied to education. For example, in an assessment, the teacher asks students to write a project using technological tools and then asks them to contextualize it to their own reality. This action requires critical and analytical interpretation, stimulating the student's brain and helping them become accustomed to such an action. For this reason, the teacher-student pairing, both key figures in the teaching-learning process, is crucial. The teacher acts as the pilot, familiar with the pathways to knowledge, while the student acts as the co-pilot, possessing prior knowledge and a desire to learn and master digital skills, integrating them with linguistic competencies. Furthermore, this approach allows for the analysis of all types of information: real/unreal, objective/subjective, true/false, relevant/irrelevant, and so on.

2.3 digital skills and language skills



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

Digital and linguistic competencies are intrinsically linked to equip higher education students with the necessary tools to navigate a globalized society where knowledge evolves rapidly. Furthermore, mastering language tools is essential, not in their traditional sense, but rather through technological transformation, enabling the interpretation of multimodal texts, production in diverse formats (written, video, visual graphics, or podcasts), and dissemination via educational platforms, forums, blogs, and social networks (Lankshear & Knobel, 2006). These platforms enrich linguistic competencies and incorporate multilingualism not as a barrier, but as an opportunity that promotes cultural and linguistic diversity.

The digital world impacts various fields of knowledge and is geared towards the development of critical thinking. In this context, university students are required not only to master technological skills but also to strengthen their communicative competence in order to broaden their linguistic and cultural horizons. In this way, collaboration, knowledge sharing, real-time dialogue, and the search for innovative solutions to problems that affect or jeopardize human well-being are facilitated. UNESCO maintains that digital learning should be geared towards reducing inequality gaps and consolidate itself as a force for positive change, ensuring that every student, regardless of their background, has the opportunity to develop and thrive in the digital age. Platforms such as Google Classroom, Zoom, Moodle, Microsoft Teams, etc., and other online collaboration tools, allow students to interact and refresh their language skills, connect with their peers and teachers (UNESCO, 2022). They also serve for feedback, online assessment, grammar correction programs, access to learning various languages, and help cultivate digital and linguistic skills in order to address complex problems that only human beings can solve.

To promote the use and practice of digital and linguistic skills, multilingual education and literacy programs should be promoted to adapt students to the digital transformation. Investment should also be made in developing active and adaptable citizens in the knowledge age. Furthermore, this will contribute to the continuous enrichment of writing and oral expression skills. According to Delgado, there is a need for instruction to produce students who are digitally competent, who can search for and evaluate information, transform it into new knowledge, and disseminate it. In the digital environment, it is important to create materials and resources to demonstrate knowledge and instruct students in the responsible use of technology and safe navigation within the virtual world (Delgado, 2010).

The influence of digital skills on linguistic competence is increasingly close and relevant in the current context, especially given the amount of content found on the web (videos, podcasts, social media, educational platforms). This provides diverse, rich, and essential linguistic exposure for comprehension and communication. The two variables addressed in this research have changed how language is used (instant messaging, emails, blogs, etc.). Therefore, it is necessary to develop multimodal linguistic competence, adapting to different media, audiences, and registers, both formal and informal.

Higher education aims to train individuals who can interpret diverse sources, identify biases, and argue clearly. Furthermore, digital and linguistic skills are not isolated competencies but rather complement each other to develop communicative, inquisitive, autonomous, critical, and participatory students in a digital, global, and intercultural context. Gaps in technological and linguistic access would limit full participation in the university and professional spheres.



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

3. Methodology

The research employed a quantitative methodological approach, which facilitated the analysis, validation, reliability, and contextualization of the data collection instrument. A correlational-causal study was conducted within a non-experimental design to determine the influence of digital skills and linguistic competencies on first- and second-year students at the Federico Villarreal National University. The collected data were not manipulated at the researchers' discretion, as the aim was to ensure equitable results across the student population and fulfill the research objective.

The population consisted of 600 university students. From this population, a sample was selected using purposive non-probability sampling. Participants were required to be in their first or second year, enrolled in the 2024 academic year, and taking general studies courses. The sample comprised 202 students, of whom 126 were female and 76 were male. Representativeness, participant characteristics, the university context, and other pre-established criteria were also considered to obtain accurate and reliable results.

The data collection technique was a survey. The instrument was a questionnaire created by the researchers, consisting of 20 items for each variable, with the following rating scale: Never (1), Almost Never (2), Sometimes (3), Almost Always (4), Always (5). It was validated by three expert methodologists and education specialists. A pilot test was also administered to 15 students, using Cronbach's alpha coefficient. The results for the digital skills variable were 0.868 and for linguistic competencies 0.926, indicating that the instrument is reliable and acceptable.

The researchers collected the data in the Faculties of Social Sciences, Law and Political Science, Architecture and Urban Planning, Humanities, Human Medicine, Geographic Engineering and Ecotourism, and Industrial and Systems Engineering, obtaining informed consent from the sample after submitting requests to the deans of the Faculties. The fieldwork was carried out using Google Forms; the link was sent to students via institutional email and WhatsApp. The data was stored in a Google Drive, in Excel, and the analysis was performed using SPSS V29 software.

4. Results

The study was conducted with students from the National University Federico Villarreal, Lima, Peru, and the results from the applied instruments were as follows:

	Frequency	Percentage	Valid percentage	Cumulative percentage
Sometimes	70	35	35	35
Never	4	2	2	37
Always	128	63	63	100
Total	202	100	100	

Table 1. Results of the application of digital skills in university students



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

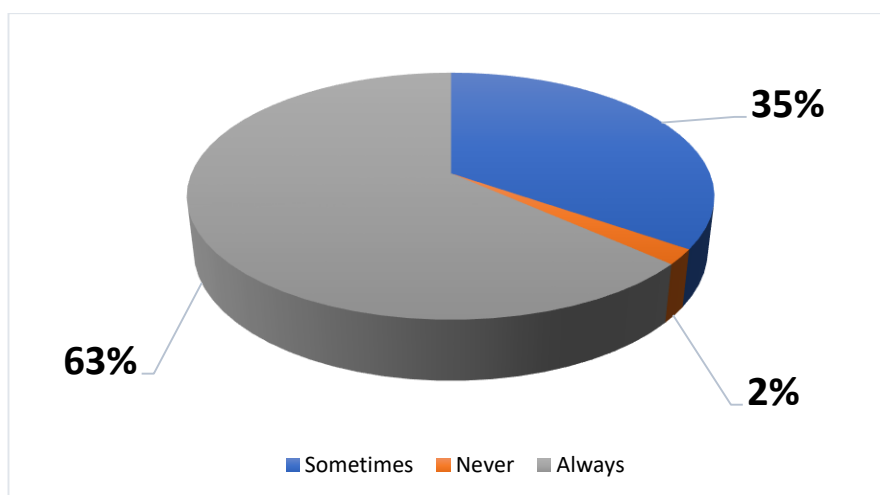


Figure 1. Results of the application of digital skills in university students

Interpretation: Table and Figure 1 reflect the knowledge that students at the Federico Villarreal National University have regarding digital skills. It can be observed that 63% of the students state that they always possess these skills, while 35% indicate that they possess them sometimes. Consequently, it is evident that the students demonstrate an adequate level in this area.

	Frequency	Percentage	Valid percentage	Cumulative percentage
Sometimes	109	54	54	54
Never	7	3	3	57
Always	86	43	43	100
Total	202	100	100	

Table 2. Results of the application of fundamental digital skills in university students

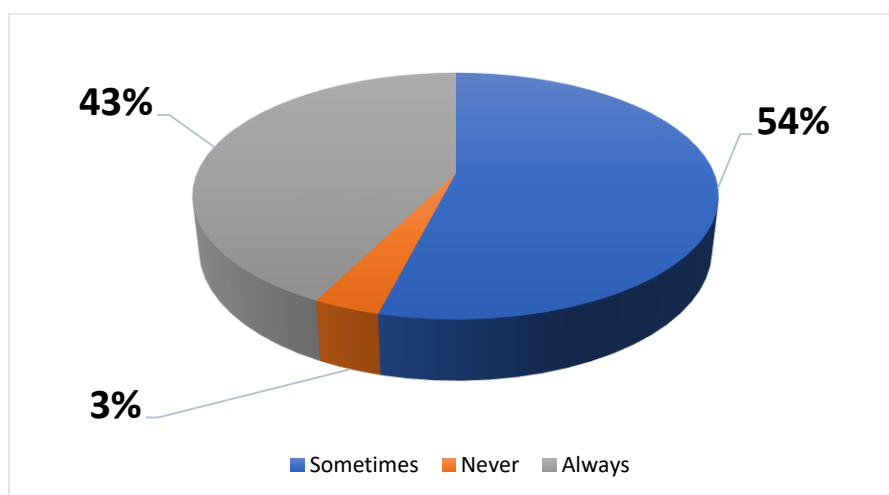


Figure 2. Result of the application of fundamental digital skills in university students

Interpretation: Table 1 and Figure 2 reflect university students' knowledge of fundamental digital skills. The results show that 54% of respondents indicate they sometimes use these



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

skills, while 43% indicate they always use them. This suggests that students seek technological tools online, such as software applications, forums, social networks, Google, and YouTube, to enhance their learning and apply methods that strengthen their oral and written communication skills.

	Frequency	Percentage	Valid percentage	Cumulative percentage
Sometimes	38	19	19	19
Never	5	2	2	21
Always	159	79	79	100
Total	202	100	100	

Total 202 100 100

Table 3. Results of the application of instrumental digital skills in university students

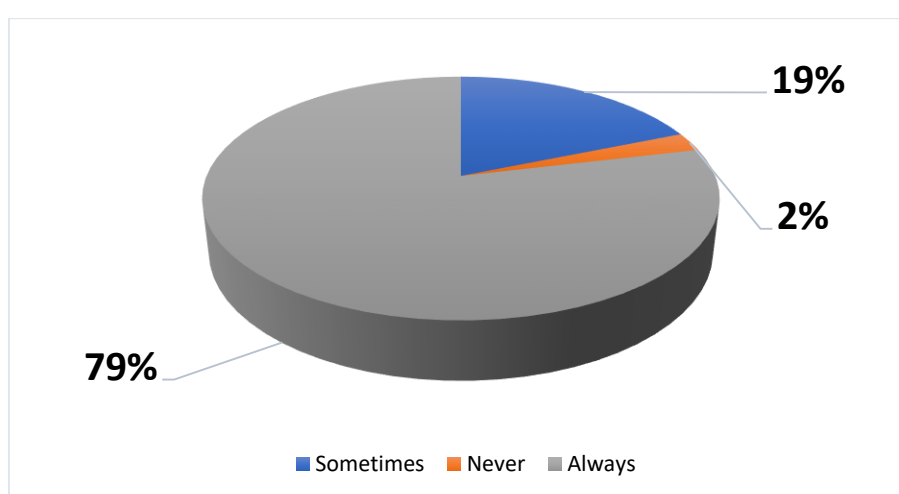


Figure 3. Result of the application of instrumental digital skills in university students

Interpretation: Table and Figure 3 reflect university students' knowledge of instrumental digital skills. The results show that 79% of respondents indicate they always use these skills, while 19% indicate they use them sometimes. This suggests that students use digital applications to manage academic activities, strengthen their command of formal language, and develop cognitive processes aimed at achieving meaningful learning.

	Frequency	Percentage	Valid percentage	Cumulative percentage
Sometimes	90	45	45	45
Never	1	1	1	46
Always	111	54	54	100
Total	202	100	100	

Table 4. Results of applying digital skills to linguistic competencies in university students



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

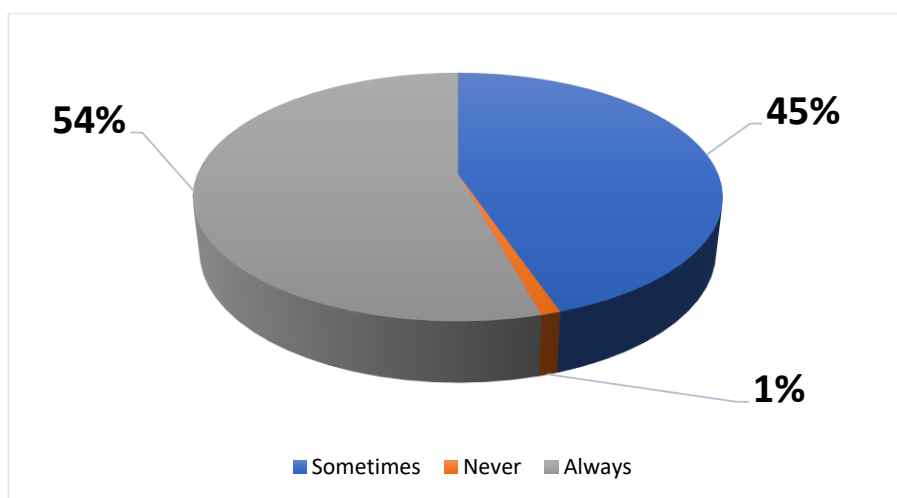


Figure 4. Result of applying digital skills to linguistic competences in university students

Interpretation: Table and Figure 4 reflect that university students possess knowledge about the use of digital tools to improve their language skills. The results show that 54% of respondents indicate that they always use these tools, while 45% indicate that they use them sometimes. This suggests that more than half of the students use technology to enrich their language grammar and consult databases such as Scopus, EBSCO, and academic repositories to find information related to oral and written expression.

	Frequency	Percentage	Valid percentage	Cumulative percentage
Sometimes	104	51	51	51
Never	5	3	3	54
Always	93	46	46	100
Total	202	100	100	

Table 5. Results of applying digital skills to oral comprehension in university students

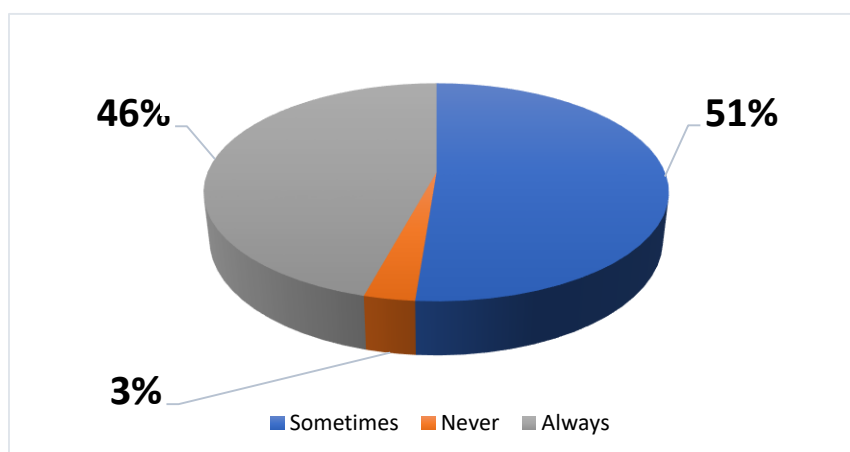


Figure 5. Result of applying digital skills to oral comprehension in university students



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

Interpretation: Table and Figure 5 reflect that university students use digital tools to improve listening comprehension. The results show that 51% of respondents indicate they use them sometimes, while 46% indicate they use them always. This suggests that some students use videoconferencing programs, such as Google Meet, Zoom, Cisco Webex, Skype, and Microsoft Teams, to communicate with their classmates and work teams. Furthermore, they use online audio sources to analyze and synthesize academic texts.

	Frequency	Percentage	Valid percentage	Cumulative percentage
Sometimes	63	31	31	31
Never	1	1	1	32
Always	138	68	68	100
Total	202	100	100	

Cuadro 6. Resultado de aplicación las habilidades digitales en la comprensión escrita en estudiantes universitarios

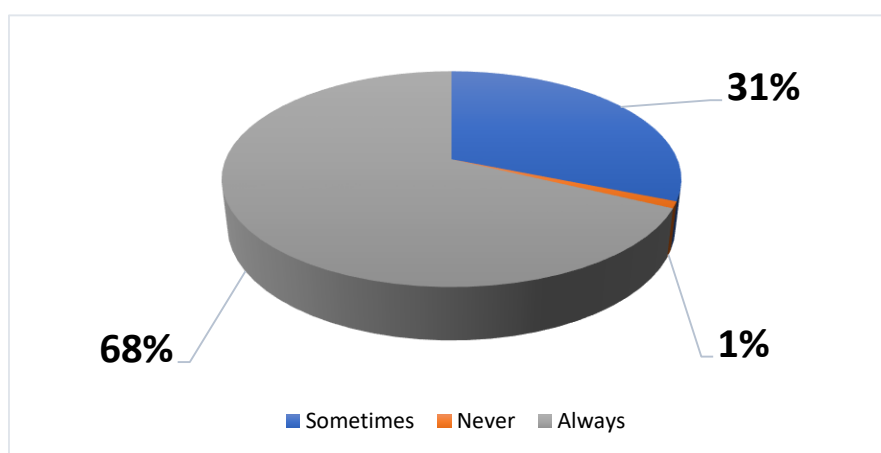


Figure 6. Result of applying digital skills to reading comprehension in university students

Interpretation: Table and Figure 6 reflect that university students use digital tools to improve reading comprehension. The results show that 68% of respondents indicate they always use them, while 31% indicate they use them sometimes. This suggests that the majority of students use applications such as Excel, Canva, PowerPoint, and Microsoft Word, among others, to understand digital texts rationally, with appropriate content, standard vocabulary, and a clear, precise, and concise structure.

	Frequency	Percentage	Valid percentage	Cumulative percentage
Sometimes	76	38	38	38
Never	4	2	2	40
Always	122	60	60	100
Total	202	100	100	

Table 7. Results of applying digital skills to oral expression in university students



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

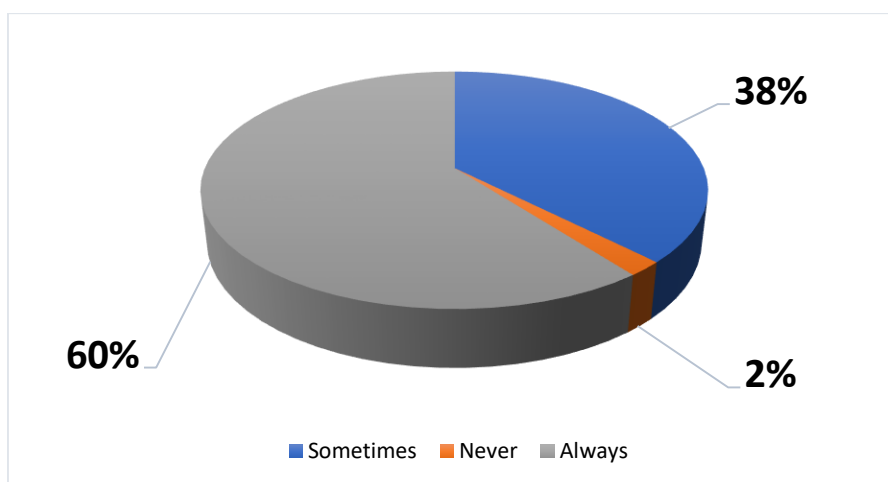


Figure 7. Result of applying digital skills to oral expression in university students

Interpretation: Table and Figure 7 reflect that university students use digital tools to enhance their oral expression. The results show that 60% of respondents indicate they always use them, while 38% indicate they use them sometimes. These results demonstrate that the students have an adequate level of oral expression, using a firm, confident, and clear tone of voice, as well as simple language that facilitates the understanding of the message by their intended audience.

	Frequency	Percentage	Valid percentage	Cumulative percentage
Sometimes	109	54	54	54
Never	5	2	2	56
Always	88	44	44	100
Total	202	100	100	

Table 8. Results of applying digital skills to written expression in university students

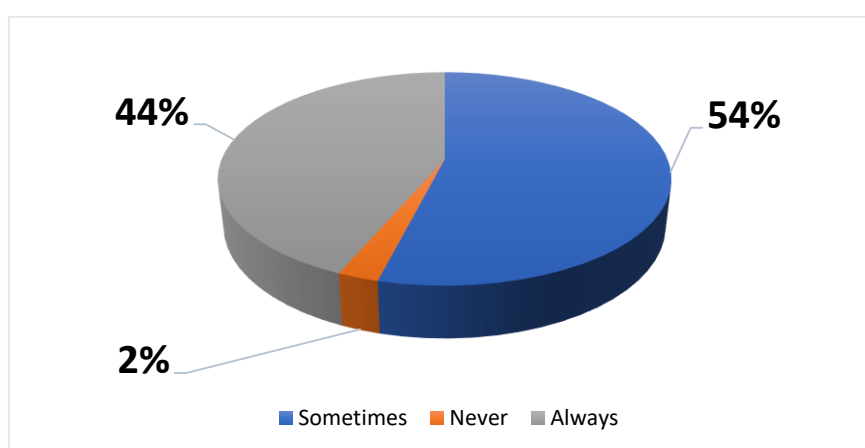


Figure 8. Result of applying digital skills to written expression in university students



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

Interpretation: Table and Figure 8 reflect that university students use digital tools to enhance their written expression. The results show that 54% of respondents indicate they use them sometimes, while 44% indicate they always use them. This suggests that some students use artificial intelligence to write their academic papers with objective information, free from emotion, fanaticism, and passion. Furthermore, they search the web for information that reflects reality and rely on spelling and grammar checkers to achieve greater clarity in their writing.

4.1 Normality test: Kolmogorov – Smirnov

The goodness-of-fit test allows us to determine if the data come from a normally distributed population. In this study, the null hypothesis (H_0) was that digital skills do not significantly influence the linguistic competencies of students at the Federico Villarreal National University in 2024; and the alternative hypothesis (H_1) was that digital skills significantly influence these competencies.

Likewise, for the normality test, the null hypothesis (H_0) was that the data have a normal distribution, and the alternative hypothesis (H_1) was that the data do not have a normal distribution. A significance level of 0.05 was considered. The scores corresponding to the variables digital skills and linguistic competencies were entered into the SPSS statistical software, from which the following results were obtained:

		Digital skills	Linguistic skills
N		202	202
Normal parameters (a,b)	Mean	38.89	75.28
	Standard deviation	5.792	11.023
Most extreme differences	Absolute	.107	.050
	Positive	.055	.050
	Negative	-.107	-.042
Z de Kolmogorov-Smirnov		1.519	.704
Sig. asintót. (bilateral)		.060	.705

Table 9. Kolmogorov-Smirnov test results

Interpretation: Based on the results obtained using the Kolmogorov-Smirnov test, the data were analyzed to determine whether or not they followed a normal distribution. For the digital skills variable, a p-value of 0.060 (two-tailed significance) was obtained, while for the linguistic competence variable, a p-value of 0.705 (two-tailed significance) was obtained. Since both values are greater than the significance level of 0.05, it is concluded that the data follow a normal distribution.

Consequently, hypothesis tests were performed using Pearson's r correlation statistic, as the data for the variables meet the assumption of normality.

4.2 Pearson correlation coefficient (r)

Pearson's correlation coefficient (r) is a correlation method for variables measured by intervals or ratios and for linear relationships. It is calculated from the scores obtained in a sample with two variables. The scores obtained for one variable are related to those of the other, using the same participants or cases.



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

		Digital skills	Linguistic skills
Digital skills	Pearson Correlation	1	.695(**)
	Sig. (2-tailed)		.000
	N	202	202
Digital skills	Pearson Correlation	.695(**)	1
	Sig. (2-tailed)	.000	
	N	202	202

Table 10. ** Correlation is significant at the 0.01 level (two-tailed)

According to the table shown, the Pearson correlation coefficient $r = 0.695$, for the general hypothesis (Ha): it is determined that digital skills significantly influence linguistic competencies in UNFV students, 2024, according to Sampieri's table is a medium or moderate positive correlation.

		Digital skills	Linguistic skills
Digital skills	Pearson Correlation	1	.669(**)
	Sig. (2-tailed)		.000
	N	202	202
Listening comprehension	Pearson Correlation	.669(**)	1
	Sig. (2-tailed)	.000	
	N	202	202

Table 11. ** Correlation is significant at the 0.01 level (two-tailed)

According to the table shown, the Pearson correlation coefficient $r = 0.669$, so for Specific Hypothesis 1: it is determined that digital skills significantly influence oral comprehension in UNFV students, it has a medium or moderate positive correlation.

		Digital skills	Linguistic skills
Digital skills	Pearson Correlation	1	.691(**)
	Sig. (2-tailed)		.000
	N	202	202
Listening comprehension	Pearson Correlation	.691(**)	1
	Sig. (2-tailed)	.000	
	N	202	202

Table 12. ** Correlation is significant at the 0.01 level (two-tailed)

According to the table shown, the Pearson correlation coefficient $r = 0.691$, then for the specific hypothesis 2: it is determined that digital skills significantly influence written comprehension in UNFV students, it has a medium or moderate positive correlation.



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

		Digital skills	Linguistic skills
Digital skills	Pearson Correlation	1	.499(**)
	Sig. (2-tailed)		.000
	N	202	202
Oral expression	Pearson Correlation	.499(**)	1
	Sig. (2-tailed)	.000	
	N	202	202

Table 13. ** Correlation is significant at the 0.01 level (two-tailed)

De acuerdo con el cuadro mostrado, el coeficiente de correlación de Pearson $r = 0.499$, entonces, para la Hipótesis específica 3: se determina que las habilidades digitales influyen significativamente en la expresión oral en estudiantes de la UNFV, posee una correlación positiva media o moderada.

		Digital skills	Linguistic skills
Digital skills	Pearson Correlation	1	.452(**)
	Sig. (2-tailed)		.000
	N	202	202
Written expression	Pearson Correlation	.452(**)	1
	Sig. (2-tailed)	.000	
	N	202	202

Table 14. ** Correlation is significant at the 0.01 level (two-tailed)

According to the table shown, the Pearson correlation coefficient $r = 0.452$, therefore, for Specific Hypothesis 4: it is determined that digital skills significantly influence written expression in UNFV students, has a medium or moderate positive correlation.

5. Discussion

The results obtained stem from the formulation of the problem, the establishment of general and specific objectives, hypotheses, and the comparison of existing theories with the new proposal. The researchers' perspective is also crucial; they possess critical thinking skills and are committed to honesty in presenting the results truthfully, without distortion or bias. The study aimed to determine the influence of digital skills on the linguistic competencies of first- and second-year students enrolled at the Federico Villarreal National University in 2024. Regarding the assessment of digital skills, 63% of the students consistently demonstrated knowledge, aptitude, and proficiency in using virtual tools. In accordance with this, Salguero et al. maintain that it is important to employ diverse digital strategies to ensure students demonstrate adequate academic performance; they also indicate that if these strategies are used appropriately, the cognitive level will be higher (Salguero, 2024).

The proposed dimensions were as follows: a) fundamental digital skills, in which 54% of students indicated they sometimes use them, while 43% indicated they always use them. These results demonstrate that students know and understand how the digital environment works. In this regard, Morduchowicz states that the virtual environment facilitates the understanding of reality from a critical, analytical, and creative perspective, which allows



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

for understanding and evaluating the content circulating on the internet (Morduchowicz, 2021); b) instrumental digital skills, a dimension in which 79% of students stated they are always accustomed to the constant use of virtual tools. According to Morduchowicz, this skill facilitates the creation of PowerPoint presentations and videos, as well as providing access to devices, templates, and platforms through which the individual completes specific tasks (Morduchowicz, 2021).

Regarding linguistic competence, 54% always use technological means to understand, practice, and evaluate the grammar of their language, while 45% do so sometimes. The data indicates that social media enhances language skills, suggesting that it contributes to language use in different communicative situations (Dos Santos, 2021). The dimensions were: a) oral comprehension, with 51% sometimes and 46% always using digital tools to improve oral expression. Gómez and Meza, in their research, promote the development and improvement of oral comprehension skills, which are enriched and strengthened through videos, training, conferences, and seminars presented online. Furthermore, they reinforce active listening, reflection, teamwork, and questioning (Gómez & Meza, 2022). b) written comprehension, with 68% always using digital tools to enhance textual comprehension.

There are various references available in the technological world. According to Padilla et al., a competent student can interpret statements and situations from the digital world and adapt them to a real and natural context (Padilla et al., 2008). c) Oral expression: 60% always seek to master grammatical vocabulary through digital content. According to Menéndez et al., adequate language training facilitates fluid, correct, and clear communication. Furthermore, it strengthens debate, the exchange of ideas, and interaction with peers in the technological environment (Menéndez et al., 2024). d) Written expression: 54% sometimes use digital tools for writing, and 44% always do. According to Carlino (2013), writing is a social practice and fundamental for constructing learning at the university level.

In this regard, the results are consistent with the literature and the comparative analysis with other international and national studies that have reached similar or comparable results. For example, Macías et al., in their study on developing linguistic competencies through the use of digital media, mention that students and teachers must adapt to advances in science and technology, which contribute to motivational development and enhance linguistic competencies (Macías et al., 2022). Therefore, this research demonstrates the influence of digital skills on the linguistic competencies of students at the Federico Villarreal National University in 2024, as shown by the verification of the hypotheses, the tables and figures developed for the study, and the applicability of the instrument to other state or private research projects seeking to enhance oral and written comprehension and expression using digital media.

6. Conclusion

The influence of digital skills on linguistic competencies was determined using Pearson's correlation coefficient (r), where $r = 0.695$, indicating a moderate positive correlation. The p -value (sig.) is less than 0.05, thus confirming the alternative hypothesis. The implementation of digital skills in the university setting highlights the evolution of reading, expressive, and written skills. It reflects the influence of digital skills on oral comprehension, where the Pearson test result $r = 0.669$, indicating a moderate positive correlation. The p -value (sig.) is less than 0.05, confirming specific hypothesis 1 (H_a): students demand



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

interactive resources to enhance oral comprehension and enrich their vocabulary through the use of knowledge found on the internet.

The results also demonstrate the influence of digital skills on written comprehension. Pearson's correlation test yielded an r value of 0.691, indicating a moderate positive correlation. Furthermore, the p -value (sig.) was less than 0.05; therefore, specific hypothesis 2 (H_a) is confirmed. This allows us to conclude that digital resources available on the internet promote reading, analysis, and synthesis. In addition, they expose students to real and fictional content, enabling them to critically discriminate and select reliable information that benefits their learning.

Similarly, the results reflect the influence of digital skills on oral expression. Pearson's correlation test yielded an r value of 0.499, demonstrating a moderate positive correlation. Likewise, the p -value (sig.) was less than 0.05; consequently, specific hypothesis 3 (H_a) is confirmed. In this sense, the student uses technological resources to enhance oral expression and develop communicative reciprocity among internet users.

Finally, the results demonstrate the influence of digital skills on written expression. Pearson's correlation test yielded a value of $r = 0.452$, indicating a moderate positive correlation. Furthermore, the p -value (sig.) was less than 0.05; therefore, specific hypothesis 4 (H_a) is confirmed. These results suggest that students employ complex cognitive processes for writing, as it is not enough to know the grammar of the language; it is also necessary to use various digital resources that allow them to optimize time and stay up-to-date with information.

Bibliographic references

- Ancira, Z., y Gutiérrez, F. (2011). Integración y apropiación de las TIC en los profesores y los alumnos de educación media superior. *Apertura*, 3(1).
- Arango, S. y Manrique, B. (2023). Interacciones comunicativas y colaboración mediada por entornos virtuales de aprendizaje universitarios. *RED, Revista de Educación a Distancia*, 76(23), 1-23. <https://doi.org/10.6018/red.544981>
- Area, Moreira, M., y Pessoa, T. (2012). New literacies to the cultural changes of Web 2.0. [De lo sólido a lo líquido: Las nuevas alfabetizaciones ante los cambios culturales de la Web 2.0]. *Comunicar*, 38, 13-20. <https://doi.org/10.3916/C38-2012-02-01>
- Carlino, P. (2013). Alfabetización académica diez años después. *Revista Mexicana de Investigación Educativa*, 18(57), 355-381. <https://www.aacademica.org/paula.carlino/103>
- Delgado, Á. (2010). La Competencia digital en los recursos de lengua castellana y Literatura. En Congreso Euro-Iberoamericano de Alfabetización Mediática y Culturas Digitales Sevilla: Universidad de Sevilla.
- Dos Santos, D. (2021). Las redes sociales y su impacto en las habilidades lingüísticas de estudiantes del nivel medio del centro regional de educación Pilar -CREP. *Ciencia Latina Revista Científica Multidisciplinar*, 5(6), 12328-12348. https://doi.org/10.37811/cl_rcm.v5i6.1233
- Gómez, S., y Meza, E. (2022). Caracterización de las experiencias de enseñanza-aprendizaje híbrida, en contexto de pandemia de los alumnos de Educación Superior. Año 2022.



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

- Ciencia Latina Revista Científica Multidisciplinar*, 6(4), 4045-4068. https://doi.org/10.37811/cl_rcm.v6i4.2915
- Jiménez, M. y Leon, T. (2024). Competencias digitales de los estudiantes del nivel superior en los procesos de enseñanza-aprendizaje. *Ciencia Latina Revista Científica Multidisciplinar*, 8(3), 219-230. https://doi.org/10.37811/cl_rcm.v8i3.11206
- Knobel, M y Lankshear, C. (2006). Digital Literacies: Policy, Pedagogy and Research Considerations for Education. *Nordic Journal of Digital Literacy*. 1(1), 12-24. <https://doi.org/10.18261/ISSN1891-943X-2006-01-03>
- Lloyd, M. (2020). Desigualdades educativas y la brecha digital en tiempos de COVID-19. Universidad Nacional Autónoma De México, Instituto De Investigaciones Sobre La Universidad y La Educación EBooks. <https://www.youtube.com/watch?v=1Fgy-iSzxI&t=3s>
- Macías, J., Moreira, P., Matute, G. y Venegas, L. (2022). Uso de medios digitales para el desarrollo de las competencias comunicativas en el idioma inglés. *Polo del Conocimiento*. 7(8), 397-408. <https://polodelconocimiento.com/ojs/index.php/es/article/view/4397/html>
- Menéndez, B., Pérez, B., Hernández, M. y Rodríguez, K. (2024). Tecnologías y habilidades lingüísticas en el ámbito docente. *Edumecentro* 16 (1), 1-25 <https://dialnet.unirioja.es/servlet/articulo?codigo=9810288>
- Morduchowicz, R. (2021). Competencias y habilidades digitales, <https://unesdoc.unesco.org/ark:/48223/pf0000380113.locale=en>
- OCDE (Organización de Cooperación y Desarrollo Económicos) (2019). TALIS 2018 Results (volume I): Teachers and School Leaders as Lifelong Learners, París, OECD Publishing. https://www.oecd.org/en/publications/talis-2018-results-volume-i_1d0bc92a-en.html
- Padilla, D., Martinez, C., Pérez, T., Rodríguez, C. y Miras, F. (2008). Competencias lingüísticas como base del aprendizaje, Psicología de la educación. *International Journal of Developmental and Educational Psychology*, 2(1), 177-183 <https://www.redalyc.org/pdf/3498/349832317019.pdf>
- Salguero Alcala, G. K., Benites Zuñiga, J. L., Salguero Alcala, A. G., Orosco León, O. E., Orosco Toribio, E. G., y Vega Vilca, C. S. (2024). Competencias digitales y rendimiento académico en los estudiantes universitarios. *Horizontes Revista De Investigación En Ciencias De La Educación*, 8(32), 164. <https://doi.org/10.33996/revistahorizontes.v8i32.713>
- Saputra, F. (2021). Liderazgo, comunicación y motivación laboral en la determinación del éxito de las organizaciones profesionales. *Revista de Derecho, Política y Humanidades*, 1 (2), 59-70. <https://doi.org/10.38035/jlph.v1i2.54>
- Serrano, Y., Aranda, O., Ramírez P.(2025). Influencia de las competencias digitales en el rendimiento académico y la evolución curricular del inglés universitariopanameño. *E-Revista Multidisciplinaria Del Saber*, 3, e-RMS10042025. <https://doi.org/10.61286/e-rms.v3i.210>



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

UNESCO (2022). Reimaginar juntos nuestros futuros. Un nuevo contrato social para la educación. *Perfiles educativos*, 44(177), 200-212.
<https://doi.org/10.22201/iisue.24486167e.2022.177.61072>

Authors

DINA INGA-LINDO holds a doctorate in Educational Sciences from the National University Enrique Guzmán y Valle. She also holds a master's degree in Research and Teaching from the National University Pedro Ruiz Gallo of Lambayeque and a master's degree in Educational Psychology from the same university. She earned a bachelor's degree in Pedagogy and Humanities, specializing in Spanish and Literature, from the National University of Central Peru.

Currently, she teaches at the National University Federico Villarreal and the National University of San Marcos, and at the postgraduate level at the National University Enrique Guzmán y Valle. She is the Coordinator in the area of Economic Sciences and Management at the National University of San Marcos. She is the Director of Tutoring and Psychopedagogy at the National University Federico Villarreal. She is also the Director of General Studies and Academic Coordinator of the Faculty of Law and Political Science at the Peruvian University of Global Integration. She has 15 years of experience teaching in Basic Regular Education. Evaluator, lecturer, and speaker at the national and international levels. Author of several books, including: **Voces del Corazón**, **El Sendero de la Investigación**, **Antarki**, **Huasahuasi Cultural**, etc., and poetry collections such as: **Brisas de Amor**, **Pluma Sanjuanina**, **Voces del Corazón**, **El Silencio del Poeta**, etc. Her research focuses on both quantitative and qualitative methods. She has published numerous articles in indexed journals at the national and international levels, and in 2021 she was awarded Best Professor at the School of General Studies of the National University of San Marcos, winning the Agustinian Theater competition "Life is Better Now in My District."

EVELYN ZAVALA-ZAVALA obtained her Master's degree in Systems Engineering with a specialization in Information Technology Management from the National University Federico Villarreal (UNFV) in Peru in 2020. She earned her Bachelor's degree in Computer and Systems Engineering from the University of San Martín de Porres (USMP) in 2006 and her Bachelor's degree in Education with a specialization in English from the National University Federico Villarreal (UNFV) in 2018. Currently, she is a full-time Assistant Professor at the National University Federico Villarreal, having previously held a management position at the same university in the Research Promotion Office of the Central Research Institute. She was also Head of the Research Unit of the Faculty of Humanities (URS-FH-UNFV). She is a member of the multidisciplinary team CADEP Acacia-UNFV and a member of the Business, Economy, and Sustainable Development Research Group (EcoDes-UNFV). Her main research topics include knowledge management, podcasts as self-directed learning, self-directed learning strategies in students, quality frameworks in higher education, the influence of digital skills on students, and smart personal learning environments.

JOANES BENOTT-SANTANDER holds a Master's degree in Educational Administration and a Master's degree in Political Science. She has completed doctoral studies in Education and a Doctorate in Psychology (Federico Villarreal National University). She is a lawyer specializing in Law and Political Science and holds a degree in Education.

Currently, she teaches in the Department of Linguistics and Literature at the Faculty of Humanities of Federico Villarreal National University. She holds an International Diploma



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

in Management Skills (ESAN University) and a Specialization in Executive Management Education (Peruvian University of Applied Sciences, UPC). She also holds a Specialization in Public Management from the Pontifical Catholic University of Peru. She has over 20 years of experience teaching at the undergraduate and graduate levels. Research professor, member of the Knowledge Community known as the Research Group: Educational Management for Social Innovation "GEIS". Member of the CADEP-ACACIA International Network. Facilitator and trainer at national and international symposia.

Declaration of authorship-CRediT

DINA INGA-LINDO: Conceptualization, methodology, software, validation, data analysis, research, resources, data curation, writing (original draft), writing (revision and editing), visualization, supervision.

EVELYN ZAVALA-ZAVALA: Conceptualization, methodology, software, validation, writing (original draft), writing (revision and editing).

JOANES BENOTT-SANTANDER: conceptualization, validation, writing the first draft, securing funding.

Statement on the use of artificial intelligence

The authors declare that they did not use Artificial Intelligence (AI) tools at any stage of the manuscript's development. No scientific content, results, analyses, or interpretations were generated by artificial intelligence. All material was developed, reviewed, and validated by the authors, who assume responsibility for its accuracy, rigor, and academic integrity



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)