

## Virtual Educational Spaces and Autonomous Learning of the English Language in Pedagogical Higher Education in Juliaca, 2024

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### Abstract

*This study evaluated the impact of virtual educational environments on the autonomous learning of English in pedagogical higher education students in Juliaca, specifically at the Cenit Galeaza Institute of Public Pedagogical Higher Education (IESPP), during the year 2024. A quantitative approach with a longitudinal correlational descriptive design was used. The population was made up of 256 students from the ten academic semesters, from which a representative sample of 157 participants was selected through simple random probability sampling. The data analysis, carried out using SPSS software, showed that virtual environments contribute significantly to the strengthening of autonomous learning. This was reflected in the adequate reliability of the measuring instrument, with a Cronbach's alpha coefficient of 0.768. Likewise, it was observed that these tools enhance the development of cognitive skills, encourage academic habits and promote positive attitudes towards learning. The results underscore the relevance of virtual educational spaces as effective resources to improve academic performance and autonomy in English language learning. It is recommended to continue implementing these platforms in the institution, as well as in similar educational contexts, in order to confirm and expand the findings obtained. These initiatives would strengthen the development of essential competences for the training of future teachers and optimize the teaching of foreign languages in the pedagogical field.*

**Keywords:** *Autonomous learning, virtual environments, higher education, English teaching, pedagogical competencies.*

### Introduction

Online vocational training institutions have grown significantly in face-to-face, hybrid, and online modalities (Cotán Fernández et al., 2021). This growth responds to social changes driven by technological integration in various areas, including education (Ayala et al., 2020). In this context, the rapid digitalization of educational processes surprised many teachers, who faced difficulties in adapting to these new demands (Atúncar-Prieto & Medina-Zuta, 2021). Virtual environments, capable of simulating real educational spaces with different levels of interaction, have established themselves as key tools in teaching (Rojas et al., 2019). However, the indiscriminate use of these tools can limit students' ability to assimilate, acquire, and create knowledge effectively (Trejo, 2019).

Since the beginning of pedagogy, learning styles have sought to adapt education to the resources and conditions of each era (Álvarez-Torres et al., 2021). ICTs have revolutionized educational processes, introducing innovative pedagogical alternatives (García, 2020). In particular, virtual learning environments (VLEs) facilitate communication and the conduct of online classes, benefiting both students and academic institutions (Rubio et al., 2022). These tools encourage collaboration, promote interaction between teachers and students, and eliminate spatial and temporal barriers (Carrasco et al., 2022). According to Ortega (2024), the pandemic accelerated the educational transformation towards hybrid and distance models, revolutionizing pedagogical practices and consolidating VLE as spaces for social interaction and collaborative learning (Vargas-Murillo, 2021).

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However, significant challenges remain. Digital illiteracy among some teachers hinders decentralized education and virtual teaching (Hinojosa et al., 2023). During the pandemic, these limitations became more apparent, underscoring the need for continuous training for teachers and students (Bonifaz et al., 2022). Likewise, Díaz (2021) highlights the growing role of virtual education in a technologically advanced society, while López (2021) emphasizes the importance of preparing teachers to work with digital natives.

VLEs have proven to be effective tools for the development of academic and social competencies. According to García et al. (2023), they promote autonomy in learning, a key aspect to face the challenges of the labor market. Melgarejo-Alcántara et al. (2021) highlight that digital educational resources and adaptive strategies significantly improve training processes, as evidenced by recent research (Incacutipa-Limachi et al., 2024).

In addition, virtual education has opened the possibility of exploring new methodologies and platforms. For example, Moodle has been widely analyzed for its impact on teaching and learning processes (Rey, 2021). Reyna (2022) highlights the value of VLE in collaborative learning, while Montero (2022) points out their potential in environmental education, although she recognizes limitations in ensuring equitable participation.

In the learning of English as a second language, Rojas and Maldonado (2020) identify problems related to the lack of interaction in dynamic environments and non-contextualized materials, which limits the development of oral skills. Autonomous learning has gained relevance, requiring students to manage their educational process and develop cognitive, affective, and interactive competencies (Enríquez & Hernández, 2021). Arroyo et al. (2023) argue that the independent study of English allows students to acquire skills autonomously, while Pérez (2020) highlights that this modality promotes learning even outside an institutional framework. Barrera and Lugo-López (2019) underline the importance of creating academic resources that promote interaction and collaborative work in virtual classrooms.

The use of technologies in the teaching of English has facilitated the creation of innovative activities for language learning. Araya-Muñoz and Majano-Benavides (2022) emphasize the role of teachers and program creators in the development of platforms and applications that improve learning environments. Rodas and Rodas (2021) highlight the value of digital tools, while Olaya and Ahumada (2023) compare the emotional impact of computer-mediated communication with face-to-face contact. Finally, Pozo (2023) underlines the advantages of virtual reality activities for contemporary education.

In this framework, the objective of this study is to evaluate the impact of virtual spaces on the autonomous learning of English in pedagogical higher education students in Juliaca, highlighting their potential to optimize training processes and develop key language skills in the year 2024.

## Literature Review

Virtual learning environments (VLEs) have transformed higher education, offering platforms that facilitate access to resources and foster autonomy in language learning. Navas Montes et al. (2015) highlight that VLEs allow students to interact with educational materials in a flexible way, adapting to their individual needs and promoting more personalized learning.

Autonomy in learning is essential for mastery of a second language. Juárez Michua (2020) points out that the use of Web 2.0 tools can motivate students and increase their independence in the English learning process.

In addition, the implementation of specific didactic proposals has been shown to increase students' autonomy in learning English, according to recent studies.

The combination of VLE and strategies that promote autonomy can result in more effective English teaching in higher education contexts. Basantes Arias et al. (2021) discuss how virtuality impacts English learning, highlighting the importance of appropriate methodologies and the adaptation of teachers to digital

platforms to improve educational outcomes. The integration of appropriate technologies and methodologies is key to optimizing these educational processes.

VLEs provide a flexible and accessible medium that allows students to personalize their learning. According to Navas Montes, Real-Poveda, Pacheco-Mendoza, and Mayorga-Albán (2015), these environments allow students to interact with educational materials adapted to their needs, promoting an autonomous and personalized learning experience. In addition, platforms such as Moodle, Edmodo, and Blackboard offer multimedia resources that enhance listening, reading, and writing comprehension of the English language.

On the other hand, Juárez Michua (2020) highlights that the use of Web 2.0 tools, such as blogs, forums, and collaborative platforms, fosters student motivation and engagement, which is essential for autonomous learning. These tools allow students to practice constantly and receive immediate feedback, key aspects in learning a language.

Autonomous learning, defined as the student's ability to make decisions about their own educational process, is crucial in the mastery of a foreign language. Holec (1981) states that autonomy not only implies the independence of the student, but also the responsibility to plan, execute and evaluate his or her own learning. In this sense, the teacher acts as a facilitator, guiding students in the proper use of virtual resources.

Basantes Arias et al. (2021) highlight that virtuality has a positive impact on the acquisition of language skills when accompanied by appropriate methodologies. To achieve this, teachers must adapt to digital platforms and develop technological competencies that allow them to guide students effectively.

Studies have shown that VLEs contribute significantly to English learning. Ramírez Montoya and García Peñalvo (2018) emphasize that digital environments improve student interaction and active participation, which increases their confidence and communication skills. In addition, platforms such as Duolingo, Rosetta Stone, and Babbel have gained popularity for offering immersive experiences that reinforce autonomous learning.

In a recent study, Mondragón Gómez and López Martínez (2023) conclude that VLEs allow students to access diversified materials and interactive activities, which fosters meaningful learning. They also highlight that the flexibility of these environments facilitates the reconciliation of learning with other academic and personal responsibilities.

## **Methodology**

### **Scope of study**

The research was carried out at the Institute of Public Pedagogical Higher Education (IESPP) CEGA, founded by Ministerial Resolution No. 174-98-ED of February 20, 1998. This institution specializes in the training of professionals in pedagogical education, standing out for its prospective approach that promotes a critical, analytical and creative personality. It also promotes values by example, actively contributing to social transformation. Within its academic offer, it includes the professional career of Languages with a specialization in English, located in the city of Juliaca, capital of the province of San Román, in the region of Puno. Juliaca covers an urban area of 1,118 hectares and registers a population density of 422.04 inhabitants per square kilometer. According to the 2007 census, it had 225,146 inhabitants, a figure that increased to 254,947 in 2011, with an average annual growth of 2.85%.

### **Description of Methods**

The study, with a duration of six months, covered the period from February to July 2024 and adopted a quantitative approach with a descriptive correlational design. The research addressed the variables "virtual educational spaces" and "autonomous learning", working with a population of 256 students enrolled in the

ten semesters of the Professional Career in Languages: English. A representative sample of 157 students was selected by simple random probability sampling, with a margin of error of 0.5% and a confidence level of 95%.

The data collection technique was the survey, using questionnaires with Likert-type scales that included positive, negative and neutral statements. These questions were designed to capture students' perceptions of the study variables, dimensions, and indicators. The results were presented in statistical tables that reflected the absolute and relative distribution of the responses.

To analyze the relationship between the variables and their dimensions, Spearman's Rho statistical test was used. This coefficient allowed the identification of significant relationships, with values close to 1 indicating a strong positive correlation and values close to -1 indicating the absence of correlation.

The main instrument was a questionnaire composed of open-ended and closed-ended questions, specifically designed to collect relevant information. This questionnaire was subjected to a pilot test and evaluated using Cronbach's alpha coefficient to measure its internal consistency. It was subsequently validated by a panel of experts, ensuring its clarity and relevance to research.

Cronbach's alpha obtained was 0.768, which confirms the reliability of the instrument in the variables "virtual educational spaces" and "autonomous learning". This value, above the threshold of 0.7, supports the robustness of the instrument and its ability to obtain reliable data in the context of the study.

## Results and Discussion

This research, with a quantitative approach, aimed to analyze the relationship between the use of virtual educational spaces and autonomous learning in students of the English career of the IESPP "Cenit Galeaza" of Juliaca. Through a questionnaire specifically designed to capture students' perceptions and experiences, data was collected from a representative sample of 157 students. The analysis of these data was carried out using Excel for information management and SPSS for statistical analysis, which allowed obtaining both descriptive and inferential analyses, the findings of which are detailed below.

The initial descriptive results on the use of virtual educational spaces in the institution revealed that a significant proportion of students (80%) use them "almost always", while the remaining 20% reported using them "always". This high frequency of use suggests that students are increasingly integrating virtual environments as an essential part of their educational process. These virtual environments have facilitated accessibility to learning materials and interaction with other students and teachers, which, in turn, can contribute to the development of greater autonomy in learning. The absence of answers in categories such as "never" or "almost never" indicates that most students are familiar and comfortable with the use of these platforms, which reinforces the idea that these technologies are key resources in their academic training.

**Table 1.** Frequency and percentage of the variable: use of virtual educational spaces.

Levels	Frequency	Percentage
Never	0	0,0%
Almost never	0	0,0%
Sometimes	0	0,0%
Almost always	126	80,0%
Always Total	31	20,0%
Total	157	100,0%

*Note.* The results showed, regarding the use of virtual educational spaces in the investigated institution,

80% of students use them "almost always", and 20% "always". The "sometimes", "almost never" and "never" levels were not recorded.

Regarding autonomous learning, 76.7% of students indicated that they develop their cognitive and academic skills "almost always", and 20% do so "always". This result underscores that most students perceive that their ability to manage their own learning has been strengthened through the use of virtual educational spaces. The relatively low percentages in the categories "sometimes", "never" and "almost never" reinforce the notion that students are aware of the importance of autonomy and that they have internalized this concept as an essential part of their educational process. This finding also reflects a positive trend towards independent learning in the current educational context.

**Table 2.** Frequency and percentage of the autonomous learning variable.

Levels	Frequency	Percentage
Never	0	0,0%
Almost never	0	0,0%
Sometimes	5	3,3%
Almost always	120	76,7%
Always Total	32	20,0%
Total	157	100,0%

*Note.* Regarding autonomous learning, 72.7% of students indicated that they develop their cognitive skills and academic habits "almost always", while 20% do so "always". The levels of "sometimes", "never" and "almost never" were minimal.

The inferential analysis, carried out using Pearson's correlation, yielded a coefficient ( $r = 0.392$ ), which indicates a moderate positive correlation between the use of virtual educational spaces and autonomous learning. This finding is statistically significant ( $p = 0.032$ ), confirming that the use of these virtual environments is closely related to a higher level of autonomy in learning, especially in a representative sample of 157 students. This result suggests that, by interacting with virtual educational spaces, students not only access learning materials, but also experience greater responsibility in managing their time and making decisions related to their training.

This result is consistent with previous studies that have shown that the use of virtual platforms improves student autonomy. For example, Rey (2021) notes that platforms such as Moodle allow students to develop critical cognitive skills by encouraging active participation and self-regulation in learning. Similarly, Montero (2022) argues that virtual environments, by offering flexibility and accessibility, favor the development of academic habits such as self-discipline, perseverance, and organization. Thus, the findings of this research reinforce the idea that virtual educational spaces can be effective tools to promote autonomous learning, allowing students to manage their learning more effectively.

The results of this research underline the relevance of virtual educational spaces to promote autonomous learning in students. The significant positive relationship observed between the use of these platforms and the development of cognitive skills and attitudes, such as motivation and responsibility, reinforces the idea that virtual environments are valuable resources that should be used in the educational context. The flexibility that these environments offer makes it easier for students to manage their own learning, which is particularly relevant in the formation of key competences such as self-discipline and personal organization.

The findings obtained from this research underscore the importance of virtual educational spaces in promoting autonomous learning. Students' frequent use of these platforms is associated with a positive development of their cognitive skills, particularly with regard to the ability to organize, reflect, and generate

ideas in English. In addition, the flexibility offered by these environments allows students to customize their learning pace, which is essential to foster autonomy.

However, despite the positive results observed in cognitive skills and attitudes towards learning, no significant correlation was found with academic habits. This finding suggests that, although students regularly use virtual environments, they do not necessarily help them develop consistent academic habits, such as long-term planning or time management in a structured way. This may be an indication that, despite constant interaction with the platforms, students might need more explicit guidance on how to effectively integrate these resources into their daily study routine.

This result invites us to reflect on the fact that the relationship between the use of virtual platforms and the improvement of academic habits is not direct or automatic. While technology facilitates access to information and resources, students' ability to develop effective study habits may also depend on other factors, such as intrinsic motivation, institutional support, and training in learning strategies. For example, previous studies have shown that students who receive specific training on how to organize their time and academic tasks are more likely to develop good study habits (Rojas et al., 2019).

However, although the results show a positive correlation with cognitive abilities and attitudes, no significant relationship with academic habits was identified. This finding suggests that while students use virtual environments on a regular basis and see improvements in their cognitive skills, they may not be effectively integrating these tools into their daily academic routine. This could indicate that students, despite their high frequency of use of virtual educational spaces, still face challenges in developing solid and sustainable academic habits. Students may need more guidance in terms of creating an effective study routine that makes the most of the digital tools available.

On the other hand, the lack of correlation with academic habits could also reflect the need to incorporate more integrated and structured pedagogical practices that encourage not only interaction with platforms, but also the continuous monitoring and evaluation of academic progress. Research by Barrera and Lugo-López (2019) suggests that the integration of digital educational resources should be accompanied by pedagogical strategies that promote constant interaction between students and teachers, as well as continuous feedback that encourages the improvement of study habits.

The results of this research offer several practical implications for the improvement of autonomous learning in the higher education context. First, the need to continue promoting the use of virtual educational spaces as a key tool in the teaching-learning process is highlighted, since these environments not only facilitate access to study materials, but also encourage the development of cognitive and attitudinal skills necessary for autonomy. However, it is important that educators and educational institutions accompany the use of these platforms with pedagogical strategies that favor not only autonomy in access to information, but also the development of solid academic habits.

To improve the integration of virtual spaces into students' academic lives, it is recommended to implement training sessions in time management and study planning, using virtual platforms as a means to guide and monitor progress. In addition, the creation of activities that promote self-regulation of learning, such as self-evaluation, the establishment of academic goals and reflection on the learning process, should be encouraged.

In addition, educational institutions should encourage greater interaction between students and teachers through virtual environments, promoting greater feedback and monitoring of academic progress. This would not only contribute to the development of autonomy, but would also help to improve study habits and attitudes towards learning, such as responsibility and motivation.

## Conclusions

The results of this research confirm that the use of virtual educational spaces is significantly associated with autonomous learning in English learners at the IESPP "Cenit Galeaza" in Juliaca. These environments

contribute significantly to the development of cognitive skills and attitudes, such as motivation and responsibility, which are fundamental for autonomy in learning. However, the lack of meaningful correlation with academic habits suggests that, although students frequently use these platforms, there are still opportunities to improve the integration of these resources into their academic routines. It is essential that educational institutions continue to strengthen the use of these digital tools, complementing them with pedagogical strategies that support the development of consistent and sustainable study habits.

**Positive impact of virtual educational spaces.** The research revealed a moderate positive correlation ( $r = 0.392$ ) between the use of virtual educational spaces and autonomous learning, evidencing its potential to optimize teaching and learning processes in pedagogical environments.

**Development of cognitive skills.** Students improved essential skills such as interpretation, idea generation and active participation in the English language, fundamental aspects for autonomous learning.

**Strengthening habits and attitudes.** Significant progress was observed in planning, motivation and responsibility, key elements to promote autonomy in students.

**Advantages of flexibility.** Virtual educational spaces allowed for more efficient time management, promoting self-discipline and perseverance in learning.

The main objective was to analyze the relationship between autonomous learning and the use of virtual educational spaces in English learners at the IESPP "Cenit Galeaza" in Juliaca, during the year 2024. Pearson's correlation ( $r = 0.392$ ) confirmed a moderate positive relationship, which supports that the use of virtual platforms favors autonomous learning. Previous studies reinforce these findings: Rey (2021) highlighted how platforms such as Moodle enhance cognitive skills and student participation, while Montero (2022) stressed that the flexibility of these environments improves academic habits, promoting self-discipline and perseverance. Rojas et al. (2019) pointed out that virtual environments promote motivation, responsibility, and autonomy. These results emphasize the importance of integrating educational technologies to strengthen autonomous learning, especially in language teaching.

## Acknowledgement

Special thanks to all the administrative staff, teachers and students of the IESPP CEGA, for their valuable contribution and support in this research work.

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