

## ARTICLE

# The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

*El Entorno Virtual Second Life en la Competencia Comunicativa Escrita en Estudiantes de Educación Básica*

Dany Galu Vargas-Chavez<sup>1</sup>, David Salomon Quispe-Choque<sup>2</sup>, Ladislao Monge-Suarez<sup>3</sup> and Luis Alberto Osorio-Chirinos<sup>4</sup>

<sup>1</sup>Continental University, Huancayo, Peru, email: [dvargasc@continental.edu.pe](mailto:dvargasc@continental.edu.pe)

<sup>2</sup>Continental University, Huancayo, Peru, email: [dquispech@continental.edu.pe](mailto:dquispech@continental.edu.pe)


<sup>3</sup>Continental University, Huancayo, Peru email: [lmonge@continental.edu.pe](mailto:lmonge@continental.edu.pe)

<sup>4</sup>Continental University, Huancayo, Peru, email: [losorio@continental.edu.pe](mailto:losorio@continental.edu.pe)

 **Received:** August 4, 2025

 **Accepted:** December 9, 2025

 **Published:** May 29, 2026

 **DOI:** 10.37843/rted.v19i1.732

## ABSTRACT

The rapid development of ICTs has significantly impacted various sectors, including education. Therefore, the objective of this research was to demonstrate whether the use of the Second Life virtual environment improves the development of the competence “Writes various types of texts in their mother tongue” among students at the Ollantay Educational Institution. The study was conducted within the positivist paradigm, under the hypothetico-deductive method, with a quantitative approach and a one-group pre-experimental pretest-posttest design, with descriptive-comparative scope, and longitudinal temporality. A non-probabilistic sample of 29 students was selected. Two main variables were analyzed: the virtual environment as a means of pedagogical interaction and written communicative competence as an expression of students’ expressive development. Data were collected through systematic observation during the implementation of the learning sessions, and written performance was assessed using a previously validated analytical rubric. To guide the analysis, one general hypothesis and four specific hypotheses were formulated, allowing the study to examine the overall competence and its specific dimensions in greater depth. The data were analyzed using the Wilcoxon signed-rank test. The results showed statistically significant differences between the pretest and posttest scores, demonstrating that the use of the Second Life virtual environment had a positive influence on written communicative competence, both at the general level and in its specific components. The study concludes that Second Life represents a valuable pedagogical resource for strengthening written production and contributes relevant evidence for future educational research.

**KEYWORDS:** Second Life, communicative competence, virtual reality, avatar.

## RESUMEN

El rápido desarrollo de las TIC ha impactado significativamente diversos sectores, incluido el educativo. Por ello, el objetivo de esta investigación fue demostrar si el uso del entorno virtual Second Life mejora el desarrollo de la competencia “Escribe diversos tipos de textos en su lengua materna” en estudiantes de la Institución Educativa Ollantay. El estudio se desarrolló desde el paradigma positivista, bajo el método hipotético-deductivo, con enfoque cuantitativo y diseño preexperimental de un solo grupo con pretest y posttest, de alcance descriptivo-comparativo y temporalidad longitudinal. Se seleccionó una muestra no probabilística de 29 estudiantes. Se analizaron dos variables principales: el entorno virtual como medio de interacción pedagógica y la competencia comunicativa escrita como expresión del desarrollo comunicativo de los estudiantes. La recolección de datos se realizó mediante observación sistemática durante la ejecución de las sesiones de aprendizaje y el desempeño escrito se evaluó con una rúbrica analítica previamente validada. Para orientar el análisis, se formularon una hipótesis general y cuatro hipótesis específicas, lo que permitió examinar la competencia global y sus dimensiones específicas con mayor profundidad. Los datos se analizaron mediante la prueba de rangos con signo de Wilcoxon. Los resultados evidenciaron diferencias estadísticamente significativas entre el pretest y el posttest, demostrando que el uso del entorno virtual Second Life influyó positivamente en la competencia comunicativa escrita, tanto en el nivel general como en sus componentes específicos. Se concluye que Second Life constituye un recurso pedagógico valioso para fortalecer la producción escrita y aporta evidencia relevante para futuras investigaciones educativas.

**PALABRAS CLAVE:** Second Life, competencia comunicativa, realidad virtual, avatar.

## How to Cite



Vargas-Chavez, D., Quispe-Choque, D., Monge-Suarez, L., & Osorio-Chirinos, L. (2026). The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students. *Docentes 2.0 Technological-Educational Journal*, 19(1), 5–16. <https://doi.org/10.37843/rted.v19i1.732>



## The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

### Introduction

The rapid development of ICT greatly affected several sectors, one of which was the educational sector, because the students' path toward knowledge, the connection with the teacher, and the creation of knowledge are currently very different. Not only internet access but also the ability to manage several types of technological tools have defined new relationships in teaching and learning practices. From this perspective, communication skills have been more deeply affected, and relevant discrepancies appear in their acquisition, especially after the remote education experience imposed by the COVID-19 outbreak.

At the Ollantay Educational Institution, Ollantayambo district, Cusco, Peru, this problem was likewise demonstrated. Nevertheless, student retention was achieved after the return to face-to-face education. Many of these students were promoted to the next grade without achieving basic competencies. Teachers assumed the task of leveling learning in a short period while facing difficulties. In the area of Communication, 67% of fourth-grade students revealed limitations, mainly in the competence "Writes various types of texts in their mother tongue." This situation constituted an obstacle to their future academic development. In response, it became necessary to question traditional forms of teaching. New pedagogical orientations adapted to the reality and interests of learners were outlined, and it was agreed that the Second Life virtual environment could be an inclusive and innovative resource by providing alternative spaces and dynamic processes capable of strengthening learning.

Research on immersive technologies in education shows that environments such as Second Life stimulate creativity, collaboration, and the development of communicative competencies. Many studies emphasize that virtual environments and digital methods strengthen learning. Dalgarno & Lee (2010) and Gregory et al. (2014) demonstrated that the use of virtual classrooms, such as Second Life, strengthens analytical capacity in academic settings. Coello et al. (2024) and Cassany (2019) also highlighted the relevance of digital strategies for text production. Similarly, Escobar & Gómez (2020) and Cervantes & Alvites (2021) showed that accessible

resources, such as WhatsApp and book trailers, generate digital, narrative, and communicative skills. Despite all this, in rural areas, these experiences remain insufficient, which makes the present research a current proposal.

The objective of the research was to demonstrate that using the virtual resource Second Life can significantly improve the development of the competence "Writes various types of texts in their mother tongue" in students of the Ollantay Educational Institution. Likewise, the general problem that motivated this academic analysis was: What are the effects of using the Second Life virtual environment on the communicative competence "Writes various types of texts in their mother tongue" in students of the Ollantay Educational Institution in the Cusco region of Peru? Four specific dimensions linked to each of the capacities comprising competence were formulated.

### Methodology

To respond to the stated objective and based on the lines of research, as well as the generation of knowledge, a study was conducted within the positivist paradigm, which focuses on the measurement of variables, statistical analysis, and the generalization of results (Creswell, 2014). It was developed under the hypothetico-deductive method, in which it is stated that this scientific method is based on assumptions and refutations: hypotheses are proposed that must necessarily be contrasted with experience (Popper, 1959). The study adopted a quantitative approach and a one-group pre-experimental pretest-posttest design with descriptive-comparative scope and longitudinal temporality, since students' performance was assessed before and after the pedagogical intervention mediated by the Second Life virtual environment.

The population, understood as the set of individuals subjected to the research, in this case, applied only to the fourth grade of 403 secondary-level students at the "Ollantay" Educational Institution, located in the province of Urubamba, Cusco. Likewise, the experimental sample of this study consisted of fourth-grade students, section "A," in secondary education, whose ages ranged between 15 and 16 years. This section included 29 students:

#### How to Cite



Vargas-Chavez, D., Quispe-Choque, D., Monge-Suarez, L., & Osorio-Chirinos, L. (2026). The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students. *Docentes 2.0 Technological-Educational Journal*, 19(1), 5-16. <https://doi.org/10.37843/rted.v19i1.732>



## The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

19 males and 10 females. This selection was made according to accessibility and the students' willingness to participate in the educational intervention, as well as institutional willingness and operational feasibility, key elements in applied research conducted in rural contexts (Bridgeforth et al., 2021; García, 2019).

Data collection relied on systematic observation throughout the implementation of the learning sessions. First, the pretest established the baseline level of the competence "Writes various types of texts in their mother tongue." Subsequently, the pedagogical intervention incorporated the Second Life virtual environment as a didactic mediation strategy. Finally, the posttest identified the changes observed after the intervention.

This procedure followed the pre-experimental structure M:  $O_1 - X - O_2$ , where M represents the experimental group,  $O_1$  the initial measurement, X the intervention mediated by Second Life, and  $O_2$  the final measurement used to assess variation in students' performance. This design suits educational contexts in which control groups are not feasible; however, it requires cautious interpretation because it does not allow full control of external variables that may influence learning outcomes (Hernández et al., 2014).

Despite this limitation, its application in an authentic school setting provided relevant empirical evidence on the changes experienced by the intervened group and allowed examination of the pedagogical contribution of immersive virtual environments to the development of written communicative competence.

The tools, which, according to Bernal (2010), are certain methodological resources that help acquire valid and reliable information to support research results, were used under this premise. In the present research, the following were used:

- Structured observation, to record behaviors related to written planning and production.
- Text production test (pretest and posttest), designed according to the expected performances of the National Curriculum for the area of Communication (Ministry of Education - MINEDU, 2017).

- Analytical rubric for textual evaluation, which included the levels beginning, in process, achieved, and outstanding. This instrument was approved by experts and made it possible to quantify progress in important indicators such as coherence, cohesion, adequacy, and, of course, linguistic correctness.

Analytical rubrics allow fairer and more objective assessments by establishing clear performance criteria (Rusman et al., 2019; Rodríguez, 2012). In that understanding, levels such as beginning, in process, achieved, and outstanding were used.

Regarding validity, the instruments were reviewed by three experts, following methodological recommendations to guarantee content objectivity through specialized judgment (Ñaupas, 2018). Data analysis was performed using the Wilcoxon signed-rank test, a non-parametric alternative especially suitable for small and non-normal samples (Field, 2018; Banda & Tailoka, 2021). Fundamental ethical aspects were also guaranteed, such as confidentiality, informed consent, and institutional authorization.

Regarding statistical analysis, the data were processed with the objective of contrasting the pretest and posttest results applied to the experimental group, composed of 29 fourth-grade secondary students from the "Ollantay" Educational Institution, located in the province of Urubamba, Cusco. The data collected were processed using the non-parametric Wilcoxon signed-rank test; this technique is suitable for small samples and non-normal distributions. Measuring information was organized in matrices and analyzed with the support of statistical software, which made it possible to establish the existence of statistically significant differences before and after the pedagogical mediation based on the Second Life virtual environment.

The data collection instrument for the dependent variable, written production of the expository text, was an analytical rubric approved by expert judgment and organized according to the performances of the Communication area (MINEDU, 2017). This instrument assessed four dimensions: (A) adequacy of the text to the communicative situation, (B) organization and coherence of ideas, (C) pertinent



## The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

use of written language conventions, and (D) reflection on and evaluation of one's own text. Each dimension was operationalized into performance indicators distributed across three stages: Socializing and sharing information, Knowledge construction, and Development. Likewise, the assessment scale comprised four achievement levels: Beginning (0), In process (1), Achieved (2), and Outstanding (3), with specific descriptions for planning, writing, and revising the text, always taking into consideration the structure (introduction, development, and conclusion), the use of connectors, spelling, visual design, and paratextual elements.

The rubric instrument made it possible to obtain quantitative scores that served as the basis for statistical analysis, supporting objectivity and comparability in the evaluation of performance before and after the mediation. The results demonstrated significant improvements in the adequacy, coherence, and linguistic correctness of expository texts, confirming the effectiveness of using Second Life to strengthen written communicative competence.

Finally, the authors declare that in the present research, the primary ethical elements in educational studies were rigorously certified, such as informed consent, confidentiality of the information obtained, and institutional authorization. In this regard, all participants were informed about the objectives of the research, the voluntary nature of their participation, and the exclusive academic use of the data obtained. Anonymity of responses was also guaranteed through information coding to avoid any type of identification.

### Results

The use of Second Life produced statistically significant improvements in written competence. The research revealed that using Second Life resources contributed significantly to the development of students' writing, as it combined immersion experiences with guided writing processes. The conception of avatars, active participation in simulated scenarios, and formative feedback increased interaction, motivation, and dynamic participation. In this way, students achieved

significant improvements in the planning, textualization, and revision of their writings, which was confirmed through assessment instruments and a final comparison activity.

It was an eight-week intervention in the second term of the 2023 school year within the context of the Communication subject; it included planned classes with moments of immersion, interaction in the virtual environment, and text production for several communicative purposes (describing, narrating, arguing).

To carry out the intervention, the experimental group actively participated in activities within the Second Life virtual environment, where students created their avatars, explored thematic spaces, assumed roles in simulated situations (such as interviews, collaborative stories, and debates), and then produced written texts based on these experiences.

Each session combined a phase of virtual interaction with a phase of guided writing, using graphic organizers, rubrics, and specific criteria for planning, textualization, and revision of texts. According to Zuñe et al. (2023), authentic identification with the environment and high levels of interaction and motivation significantly increase student participation in immersive activities.

Throughout the intervention, the study used complementary assessment instruments, including checklists, analytical rubrics, and field journals, to document students' progress in written production with greater methodological consistency. In addition, questionnaires gathered students' perceptions of the Second Life virtual environment, particularly its perceived contribution to motivation, engagement, and writing performance.

This phase included formative feedback sessions in which students in the experimental group revised their written productions according to previously established criteria, thereby strengthening self-regulation, metacognitive reflection, and progressive improvement in writing. At the end of the experimental period, all participants completed a common final writing task, which enabled a systematic comparison of the achievements reached in each dimension of the assessed competence.



**Table 1**

*Frequency Table of the Dependent Variable in the Experimental Group.*

COMPETENCE: Writes various types of texts in their mother tongue	Pretest Frequency	Pretest Percentage	Posttest Frequency	Posttest Percentage
C (0-10)	29	100.0	0	0.0
B (11-13)	0	0.0	4	13.8
A (14-17)	0	0.0	22	75.9
AD (18-20)	0	0.0	3	10.3
<b>Total</b>	29	100.0	29	100.0

*Note.* In the pretest, 100% of the learners were located at level “C.” After the mediation, in the posttest, 89.7% reached levels A or higher, own elaboration (2023).

The results achieved by the students of the experimental group in the competence “Writes various types of texts in their mother tongue,” assessed both before (pretest) and after (posttest) the application of the didactic strategy supported by the Second Life virtual environment, demonstrate significant progress in their performance, as shown in Table 1. The comparison of the two measurements shows that, after the teacher’s intervention, learners improved not only in the coherence and cohesion of their writings but also in the planning, organization, and revision of texts. This progress indicates that the use of immersive virtual environments enhanced motivation and commitment to improving writing, thus generating a significant impact on the development of communicative competence.

**Pretest – Before the Intervention**

In the initial test (entry level), all students (29 students) were at the beginning level (C), with scores ranging from 0 to 10 points (100%); this evidenced the low degree of development of competence in question. No students were recorded in the “in process” (B),

“expected” (A), and “outstanding” (AD) stages, indicating an urgent need to reinforce students’ text production.

**Posttest – After the Intervention**

However, the distribution of achievement levels varied significantly after the intervention (posttest): none of the students remained at the initial level, the majority (75.9%) reached the expected level (A), 13.8% were in process (B), and 10.3% reached the excellent level (AD).

These results lead us to conclude that the pedagogical use of the Second Life virtual environment had a beneficial and statistically significant effect on the acquisition of writing competence, since These results indicate that the pedagogical use of the Second Life virtual environment had a beneficial and statistically significant effect on the acquisition of writing competence, since all students progressed toward higher achievement levels.

**Analysis of the Study Dimensions of the Dependent Variable (Writes Various Types of Texts in Their Mother Tongue)**

**Table 2**

*Frequency Table of Dimension 01 in the Experimental Group.*

D1: Adapts the text to the communicative situation	Pretest Frequency	Pretest Percentage	Posttest Frequency	Posttest Percentage
C (0-10)	20	69.0	0	0.0
B (11-13)	9	31.0	3	10.3
A (14-17)	0	0.0	16	55.2
AD (18-20)	0	0.0	10	34.5
<b>Total</b>	29	100.0	29	100.0

*Note.* In the pretest, 69% of the learners were located at level C. In the posttest, 89.7% reached levels A or higher, showing adequate development in the intervened capacity, own elaboration (2023).



## The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

As shown in Table 2, an important improvement was observed in the dimension “Adapts the text to communicative situations,” evidencing the significant impact of the proposed strategy. While in the pretest, only a reduced percentage of students reached the expected level, in the posttest, a substantial increase in this category was verified. This progress suggests that the use of immersive virtual environments such as Second Life

strengthened learners’ ability to align their written productions with communicative intentions and the characteristics of recipients, thereby achieving greater effectiveness and clarity in their texts. For this reason, the mediation not only enhanced writing-related aspects but also reinforced learners’ discursive knowledge, supporting an integral improvement in competence.

**Table 3**  
*Frequency Table of Dimension 02 in the Experimental Group.*

D2: Organizes and develops ideas coherently and cohesively	Pretest Frequency	Pretest Percentage	Posttest Frequency	Posttest Percentage
C (0-10)	29	100.0	2	6.9
B (11-13)	0	0.0	15	51.7
A (14-17)	0	0.0	10	34.5
AD (18-20)	0	0.0	2	6.9
<b>Total</b>	29	100.0	29	100.0

*Note.* In the pretest, learners reached level C; in the posttest, 93.1% improved their performance, reaching levels B or higher, own elaboration (2023).

As shown in Table 3, the results reflected a significant advance in the dimension “Organizes and develops ideas coherently and cohesively” among learners, revealing progress in the logical ordering and sequencing of their writings. Compared with the initial stage, the number of students located at the “in process” and “achieved” levels increased considerably after the application of the virtual

environment. This transformation suggests that the immersive use of the Second Life virtual environment helped participants to better structure their thoughts, connect ideas appropriately, and maintain greater discursive continuity. In this way, an important improvement was observed in the quality of the writings, strengthening both the clarity and argumentative consistency of the written texts.

**Table 4**  
*Frequency Table of Dimension 03 in the Experimental Group.*

D3: Uses written language conventions appropriately	Pretest Frequency	Pretest Percentage	Posttest Frequency	Posttest Percentage
C (0-10)	29	100.0	0	0.0
B (11-13)	0	0.0	4	13.8
A (14-17)	0	0.0	20	69.0
AD (18-20)	0	0.0	5	17.2
<b>Total</b>	29	100.0	29	100.0

*Note.* Regarding the pretest, 100% of the learners obtained level C. After the mediation, 86.2% reached levels A or higher, own elaboration (2023).

As shown in Table 4, this dimension also presented significant improvements, expressed in the strengthening of punctuation, spelling, and grammar in the texts written by learners. In contrast with the initial results, greater care was shown in the use of language rules, which favored the clarity and formal

correctness of the writings. These advances are clearly related to the actions carried out in the Second Life environment, where students, by interacting in simulated contexts and then transferring those experiences to their writings, felt motivated to review their productions with greater attention. Therefore, the intervention not only affected the creative and

**The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students**

discursive dimension of writing but also linguistic accuracy, strengthening comprehensive learning.

**Table 5**  
*Frequency Table of Dimension 04 in the Experimental Group.*

<b>D4: Reflects on and evaluates the form, content, and context of the written text</b>	<b>Pretest Frequency</b>	<b>Pretest Percentage</b>	<b>Posttest Frequency</b>	<b>Posttest Percentage</b>
<b>C (0-10)</b>	29	100.0	5	17.2
<b>B (11-13)</b>	0	0.0	16	55.2
<b>A (14-17)</b>	0	0.0	7	24.1
<b>AD (18-20)</b>	0	0.0	1	3.4
<b>Total</b>	29	100.0	29	100.0

*Note.* All learners were at level C in the pretest. After the mediation, 82.8% managed to be located at levels B or higher, own elaboration (2023).

As shown in Table 5, the results indicate progress in students’ ability to reflect on and evaluate the form, content, and context of their written texts. Although only 27.5% reached level A or higher in this dimension, 82.8% of students moved to level B or higher after the intervention, which evidences an improvement in self-evaluation, revision processes, and awareness of the quality of written production. When the four dimensions are considered together, the findings suggest that the use of the Second Life virtual environment contributed positively to the development of written communicative competence. Before the intervention, most students were located at level C, corresponding to the beginning level, across the assessed dimensions, with percentages ranging from 69% to 100%.

The results show that students had been forming their cognition with inadequate text adaptation, absence of structures, unobserved writing conventions, and little reflection in writing. In this sense, Mamani et al. (2021) propose that limitations in learners’ written text production are basically due to the limited use of metacognitive and cognitive strategies related to planning, organization, and monitoring of the text. In the authors’ opinion, in the absence of these strategies, learners will not be able to write cohesive texts adapted to academic standards, and this will result in writings lacking clarity, structure, and critical reflection.

After the intervention, the posttest results showed improvement across the four assessed dimensions, although with different levels of intensity. In D1 and D3, most students reached level

A or higher, with 89.7% and 86.2%, respectively. In contrast, D2 and D4 showed more moderate progress when considering only levels A and AD: 41.4% in the organization and coherence of ideas, and 27.5% in reflection and evaluation of the written text. However, when level B or higher is considered, the improvement becomes more evident, reaching 93.1% in D2 and 82.8% in D4. These findings suggest that the intervention had a positive effect on written competence, especially in communicative adequacy and language conventions, while the dimensions related to coherence, cohesion, reflection, and self-evaluation require longer and more sustained pedagogical support.

Regarding the dimension “uses written language conventions appropriately,” it is observed that students reached 86.2%, and regarding the dimension “adapts the text to the communicative situation,” those who reached an A or AD level represented 89.7%. These results appear to provide evidence that the intervention using the Second Life virtual environment was conducive to the general achievement of written competence; in fact, the gains obtained involved not only formal aspects of the text (coherence, cohesion, grammatical rules) but also the functional-reflective level.

This virtual context offered a playful and interactive space, as well as certain situations conducive to real social interaction, so that students could participate actively and experiment in authentic communication, promoting their learning and text production. Avalos Zarate et al. (2025) report in a quasi-experimental study conducted with secondary

## The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

students in Trujillo, Peru, that virtual collaborative learning significantly increased the quality of argumentative texts. Finally, the fact that all dimensions improve shows the pedagogical impact of integrating interactive technologies in educational institutions, particularly in rural areas or in contexts with less positive attitudes toward written production.

### Discussion

Based on the general question of the present research, it can be concluded that the use of the Second Life virtual environment applied in the academic training of students at the Ollantay Educational Institution had a significantly positive effect on improving the communicative competence “Writes various types of texts in their mother tongue.” The evidence shows important improvements in the planning, coherence, cohesion, spelling, grammar, and creativity of texts, increased by immersive interaction and the simulation of real contexts in the virtual environment. The creation of avatars and participation in authentic communicative scenarios motivated students to conceive writing with greater effectiveness and communicative meaning. Thus, the results confirm that the Second Life virtual environment is a technological support and a catalyst that stimulates motivation, creativity, critical thinking, and autonomy in writing.

In essence, outstanding development was observed in relation to planning, coherence, cohesion, and creativity in learners’ written productions. This fact agrees with Cassany (2019), who evidenced that the integration of a writing workshop could generate important improvements in written production. The union of both academic studies confirms that an appropriate pedagogical intervention, with technological support, will have a direct influence on the increase of communicative competencies.

The empirical evidence collected in this analysis also supports the use of the Second Life virtual environment as a transformative didactic strategy. The use of this resource not only facilitates the simulation and interaction of real contexts but also invites learners to develop content with a concrete communicative purpose. Thus, the results agree with the evidence reported by Cervantes & Alvites (2021), who found that the use of book

trailers significantly helped the development of communicative competencies. Therefore, both studies highlight the effectiveness of these virtual tools that combine the visual, the narrative, and the interactive in the process of writing texts.

Likewise, the findings support what was proposed by Dalgarno & Lee (2010), who determined that the use of virtual classrooms substantially influences learning levels in university education. In this study, the Second Life environment operated not only as a space for digital interaction but also as a scenario for educational immersion that allowed students to write with a greater sense of belonging, from defined roles and with real objectives. This fact is supported by García and Seoane (2022), who stated that “enriched virtual learning environments allow students to assume a more autonomous and meaningful participation in the creation of knowledge” (p. 113). “The combination of virtual reality and gamification has proven effective in improving academic performance, active participation, satisfaction, and the development of competencies in students” (Arteaga, 2024). All the above clearly evidence the convenience of using immersive platforms such as Second Life to foster meaningful and sustainable learning in current educational settings.

Virtual environments such as Second Life provide significant opportunities for the development of discipline-specific skills and active learning through simulation and collaborative environments (Gregory et al., 2014, p. 114). On the other hand, the potential of the Second Life environment was also validated by studies such as Gregory et al. (2014), who showed that this virtual tool offers numerous opportunities for the development of specific talents in the discipline and fosters collaborative learning in such environments. In the present research, it was found that the immersive environment motivates students to organize their ideas and give communicative meaning to their texts. In fact, recent studies indicate that three-dimensional virtual spaces contribute greatly to this formative process (Lowell & Yan, 2024). Similarly, it was demonstrated that the combination of gamification and virtual reality in educational scenarios helps active participation, student motivation, and learning outcomes compared with traditional methods (Lampropoulos et al., 2024).

#### How to Cite



Vargas-Chavez, D., Quispe-Choque, D., Monge-Suarez, L., & Osorio-Chirinos, L. (2026). The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students. *Docentes 2.0 Technological-Educational Journal*, 19(1), 5-16. <https://doi.org/10.37843/rted.v19i1.732>



## The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

Another relevant aspect is the convergence of these findings with previous research on pedagogical strategies aimed at improving written production. Coello-Ibarra et al. (2024), for instance, reported positive results through the implementation of an academic writing program, which is consistent with the progress observed in the present study. In both cases, the evidence suggests that the development of textual competence requires more than technical instruction; it also demands challenging, interactive, and pedagogically mediated environments that promote individual and collective expression. In this regard, Salinas Ibáñez (2004) argues that virtual teaching-learning environments require methodological transformation, pedagogical mediation, interaction, flexibility, and didactic strategies capable of moving educational processes beyond the merely instrumental use of technological platforms. Therefore, the results of this study reinforce the relevance of integrating immersive virtual environments as pedagogical spaces that support writing development through situated, participatory, and meaningful learning experiences.

Although the results of this study show a positive impact of the Second Life virtual environment on the competence “Writes various types of texts in their mother tongue,” the research presents some limitations that must be considered, such as the reduced sample size and the application of the pre-experimental design. These facts restricted the possibility of establishing stronger causal relationships between the intervention and the achievements reached. In addition, the technological and connectivity conditions at the Ollantay Educational Institution represented a challenge, since some learners reported difficulties in accessing or managing the virtual environment. Likewise, the intervention time was brief for appreciating deeper transformations in academic writing. These restrictions do not diminish the results, but they do encourage complementing them with subsequent inquiries.

Based on the results obtained, future research could extend the scope of this study by focusing on an experimental design that allows the effects of the Second Life virtual environment to be compared more rigorously. It is also recommended to extend the duration of the intervention and investigate its

application to different educational levels and curricular areas, to analyze its impact on diverse educational competencies. Another promising branch would consist of integrating this virtual environment with active methodologies such as project-based learning to increase learners’ motivation and critical thinking. Finally, it would be notable to include a much deeper qualitative analysis of the perceptions and experiences of those involved, with the objective of understanding how immersive environments change writing processes from a more contextual and humanistic point of view.

Finally, the pedagogical value of other virtual tools, such as WhatsApp, is confirmed, as used in research such as that of Escobar & Gómez (2020), who reported significant improvements in oral and written communicative skills. In that research, 61% of students improved their communicative performance. Similarly, in this research, after the application of the strategy with the virtual resource, 75.9% of students reached achievement level “A,” compared with the predominant previous level “C.” This is evidence that, like other digital platforms, Second Life functions not only as technological support but also as a promoter of critical thinking, creativity, and student protagonism in text production.

### Conclusions

The present research is of great importance, as it validates that the use of the Second Life virtual environment has a positive impact on the development of the communicative competence “Writes various types of texts in their mother tongue” in secondary education students. The results, supported by the Wilcoxon test, showed statistically significant differences before and after the pedagogical scaffolding, confirming that this virtual environment effectively transforms the teaching and learning process in text writing. This study, therefore, not only contributes empirical evidence on the educational value of immersive technology but also confirms the need to modify traditional teaching methods, stimulating more active, contextualized, and reflective experiences in the classroom.

In accordance with specific objectives, this research could influence the future of education by

#### How to Cite



Vargas-Chavez, D., Quispe-Choque, D., Monge-Suarez, L., & Osorio-Chirinos, L. (2026). The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students. *Docentes 2.0 Technological-Educational Journal*, 19(1), 5-16. <https://doi.org/10.37843/rted.v19i1.732>



## The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

promoting the incorporation of immersive virtual environments as a component of the curriculum. The results propose that tools such as Second Life benefit communicative adequacy, textual organization, and mastery of language conventions, fundamental components for strengthening communicative competencies in the educational system. Therefore, their implementation could transform teaching practices, especially in rural contexts, by providing more motivating and collaborative learning spaces. Thus, the use of these resources would help close educational gaps and initiate more inclusive, creative teaching aligned with the demands of the twenty-first century.

It is suggested that future research deepen the study of immersive virtual environments applied to other communicative competencies and areas of human knowledge, examining their long-term effects on academic performance and educational motivation. It would also be appropriate to explore how interaction between students and teachers within the Second Life virtual environment could stimulate self-regulation and metacognitive evaluation in text production. It is further proposed to expand the samples to different geographic settings and educational levels, with the purpose of validating the results and forging evidence-based transformative pedagogical proposals. Taken together, these investigations could consolidate the use of immersive technologies as a key strategy for the comprehensive strengthening of written communication in Peruvian education.

These results not only show a positive impact due to the use of virtual environments but also show that new technologies provide favorable spaces for rethinking our teaching methods in text production. Thus, Warburton (2009) emphasizes that virtual environments enable active communicative interaction and writing through spaces that support interaction and experience-based learning. This undoubtedly supports what was obtained in this study. Regarding the specific dimensions, it was verified that the Second Life virtual tool had a positive effect on the capacity to adapt the text to the communicative situation.

The progress evidenced after the intervention shows that learners achieved greater skill in adapting their writings by aligning them with objectives and

recipients, which constitutes an important benefit in the development of communicative competencies in regular basic education in Peru. This finding invites reconsideration of the effectiveness of integrating immersive environments such as Second Life not only as a technological resource but also as a strategy in pedagogical work that promotes the meaningfulness of learning and its contextualization. In that line, Hampel (2014) argues that digital technologies and online environments can enhance interaction and communication in distance language learning by expanding the functional and communicative possibilities available to learners, which supports the results achieved in this research.

Regarding the development and organization of ideas, the results demonstrate real advances in the capacity to organize texts with cohesion and coherence, suggesting that the virtual environment helped written experiences become more reflective and planned. The advancement of these fundamental aspects in text production consolidates the urgency of offering learners scenarios and resources that favor the constant construction of written text, beyond the simple fulfillment of tasks in educational centers. Likewise, and in a complementary way, Martín et al. (2016) support that virtual platforms increase more organized and reflective writing processes, essentially in educational settings scaffolded by ICT. This supports the appropriateness of adding these technologies to the teaching of textual production.

In relation to the optimal use of language conventions, the findings corroborated that learners fostered better mastery of spelling, punctuation, and other normative components, thus reflecting not only technical progress but also awareness of the significance of language as a means of communication in society. This fact is especially relevant in rural school settings, where barriers in communicative skills are more marked. As Cassany (2021) shows, mastery of language conventions, spelling, punctuation, and discursive rules not only makes it possible to write correctly but also offers greater awareness of the cultural and social role of language in the different scenarios of communication.

Lastly, the development of the capacity for reflection and evaluation of the text shows that virtual environments such as Second Life enable important metacognitive processes for writing. This dimension,

### How to Cite



Vargas-Chavez, D., Quispe-Choque, D., Monge-Suarez, L., & Osorio-Chirinos, L. (2026). The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students. *Docentes 2.0 Technological-Educational Journal*, 19(1), 5-16. <https://doi.org/10.37843/rted.v19i1.732>



## The Second Life Virtual Environment in Written Communicative Competence among Secondary Education Students

usually left aside in traditional classrooms, was strengthened through experiences that attract learners to review, correct, and justify their discursive arrangements. As Huang et al. (2020) point out, inclusive virtual environments enhance metacognitive learning processes by providing opportunities to reflect on, evaluate, and adjust productions in more original and meaningful interaction scenarios. Along the same line, Mujica-Sequera (2022) conceptualizes the metaverse as a “transcomplex” scenario that obliges us to rethink epistemologies and pedagogical practices, directly linking educational experiences in virtual worlds (including Second Life) with new forms of teaching and technology-mediated learning. Therefore, the consideration of these immersive technologies is proposed as a promising path for future research and pedagogical practices aimed at improving the teaching of textual production and the complete development of communicative competencies.

### Conflict of Interest Statement

The authors declare that there are no conflicts of interest related to the conduct of this study or to the interpretation of its results. Likewise, the authors state that they do not maintain personal, academic, or financial relationships that could influence the development or findings of the research.

### Funding Statement

The authors declare that this research did not receive funding from public, private, or commercial institutions and that it was developed with their own resources, which guarantees independence in the research process.

### Ethics Statement

The research was conducted in accordance with ethical principles applicable to educational studies with school participants. Institutional authorization, informed consent, and protection of data confidentiality were obtained. Participation was voluntary, and the information collected through the pretest, posttest, systematic observation, and analytical rubric was used solely for academic and

scientific purposes. Likewise, student anonymity was guaranteed through the coding of records, avoiding any personally identifiable data.

### References

- Arteaga Toro, D. C., & Osorio Carrera, C. J. (2024). Competencia digital en educación: una revisión sistemática. *Aula Virtual*, 5(12). <https://doi.org/10.5281/zenodo.13227973>
- Avalos Zarate, S. A., Duran Llaro, K. L., & Polo Palacios, A. A. (2025). El aprendizaje colaborativo virtual como estrategia para mejorar la argumentación escrita en estudiantes de secundaria. *Revista Tribunal*, 5(11), 141-157. <https://doi.org/10.59659/revistatribunal.v5i11.147>
- Banda, G., Tailoka, F. P., & Muma, E. (2021). Effect of E-Learning on the Academic Performance of Third Year Students in Statistics at Mukuba University. *Journal of Mathematics and Science Teacher*, 1(2), em004. <https://doi.org/10.29333/mathsciteacher/11277>
- Bernal, C. A. (2010). *Metodología de la investigación* (3.<sup>a</sup> ed.). Pearson Educación.
- Bridgeforth, J., Kennedy, K., Alonso, J., & Enoch-Stevens, T. (2021). Conceptions of Choice, Equity, & Rurality in Educational Research. *The Rural Educator*, 42(2), 1-15. <https://doi.org/10.35608/ruraled.v42i2.1242>
- Cassany, D. (2019). *Laboratorio lector: Leer, escribir, conversar*. Editorial Anagrama.
- Cassany, D. (2021). *Enseñar lengua: De la teoría a la práctica* (2.<sup>a</sup> ed.). Editorial Octaedro.
- Cervantes Rosas, C. M., & Alvites Huamani, C. G. (2021). WhatsApp como recurso educativo y tecnológico en la educación. *Hamut'ay*, 8(2), 69-78. <http://dx.doi.org/10.21503/hamu.v8i2.2294>
- Coello-Ibarra, E. L., Neira-Orrala, M. P., Nivelá-Cornejo, M. A., & Boderó-Arizaga, L. del C. (2024). Narrativas digitales como estrategia didáctica para la producción de textos escritos. *MQR Investigar*, 8(4), 3156-3178. <https://doi.org/10.56048/MQR20225.8.4.2024.3156-3178>
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Dalgarno, B., & Lee, M. J. W. (2010). What are the learning affordances of 3-D virtual environments? *British Journal of Educational Technology*, 41(1), 10-32. <https://doi.org/10.1111/j.1467-8535.2009.01038.x>
- Escobar-Mamani, F., & Gómez-Arteta, I. (2020). WhatsApp for the development of oral and written communication skills in Peruvian adolescents. *Comunicar*, 28(65), 107-116. <https://doi.org/10.3916/C65-2020-10>
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.



- García, C. (2019). *El trabajo de campo en estudios sobre educación: Cuando los investigadores enfrentan la realidad*. Universidad de Costa Rica. <https://n9.cl/t2mf9>
- García-Peñalvo, F. J., & Seoane-Pardo, A. M. (2022). *Entornos virtuales de aprendizaje enriquecido para la educación superior*. Editorial Académica Española.
- Gregory, S., Gregory, B., Wood, D., Masterman, L., Stokes-Thompson, F., Pasfield-Neofitou, S., ... y McDonald, M. (2014). Retórica versus realidad: Un caso para el uso de mundos virtuales 3D en la formación docente. *British Journal of Educational Technology*, 45(3), 437–450. <https://doi.org/10.1111/bjet.12034>
- Hampel, R. (2014). Enhancing interaction and communication in distance language learning by using new technologies [Trans. by J. Xiao]. *Distance Education in China*, 5, 11–19. <https://oro.open.ac.uk/38408/>
- Hernández, R., Fernández, C., & Baptista, P. (2014). *Metodología de la investigación* (6.ª ed.). McGraw-Hill Education.
- Huang, H.-M., Rauch, U., & Liaw, S. S. (2020). Investigating learners' attitudes toward virtual reality learning environments: Based on a constructivist approach. *Interactive Learning Environments*, 28(6), 698–716. <https://doi.org/10.1016/j.compedu.2010.05.014>
- Lampropoulos, G., & colaboradores (2024). Virtual reality and gamification in education: a systematic review. *Educational Technology Research and Development*, 72, 1691–1785. <https://doi.org/10.1007/s11423-024-10351-3>
- Lowell, V. L., & Yan, W. (2024). Applying Systems Thinking for Designing Immersive Virtual Reality Learning Experiences in Education. *TechTrends*, 68, 149–160. <https://doi.org/10.1007/s11528-023-00922-1>
- Mamani Apaza, J. P., Pino, M. A., & Méndez, C. R. (2021). Estrategias cognitivas y comprensión de textos académicos en estudiantes universitarios. *Revista Innova Educación*, 3(4), 715–729. <https://doi.org/10.35622/j.rie.2021.04.003>
- Martín Monje, E., Elorza, I., & García Riaza, B. (Eds.). (2016). *Technology enhanced language learning for specialized domains: Practical applications and mobility* (1.ª ed.). Routledge. <https://doi.org/10.4324/9781315651729>
- Ministry of Education- MINEDU. (2017). *Currículo nacional de la educación básica. Resolución Ministerial N.º 1592017*. MINEDU. <https://hdl.handle.net/20.500.12799/4551>
- Mujica-Sequera, R. M. (2022). El metaverso como un escenario transcomplejo de la tecnoeducación. *Revista Tecnológica-Educativa Docentes* 2.0, 13(1). <https://doi.org/10.37843/rted.v13i1.268>
- Ñaupas Paitán, H. (2018). *Metodología de la investigación cuantitativa-cualitativa y redacción de la tesis* (5.ª ed.). Ediciones de la U.
- Popper, K. (1959). *The logic of scientific discovery*. Routledge.
- Rodríguez Gallego, M. R. (2012). Cómo evaluar la competencia comunicativa a través de rúbricas en educación superior. *Didac*, 60, 27–31. <https://go.docentes20.com/r9zcn>
- Rusman, E., Nadolski, R. J., & Ackermans, K. (2019). Students' and teachers' perceptions of the usability and usefulness of the first Viewbrics-prototype: A methodology and online tool to formatively assess complex generic skills with video-enhanced rubrics in Dutch secondary education. En S. Draaijer, D. Joosten-ten Brinke, & E. Ras (Eds.), *Technology Enhanced Assessment*. TEA 2018 (pp. 27–41). Springer. [https://doi.org/10.1007/978-3-030-25264-9\\_3](https://doi.org/10.1007/978-3-030-25264-9_3)
- Salinas Ibáñez, J. M. (2004). Cambios metodológicos con las TIC: estrategias didácticas y entornos virtuales de enseñanza-aprendizaje. *Bordón. Revista de Pedagogía*, 56(3-4), 469–481. <https://go.docentes20.com/rreta>
- Warburton, S. (2009). Second Life in higher education: Assessing the potential for and the barriers to deploying virtual worlds in learning and teaching. *British Journal of Educational Technology*, 40(3), 414–426. <https://doi.org/10.1111/j.1467-8535.2009.00952.x>
- Zuñe Chero, L., Romero Paredes, R., & Idrogo Burga, E. (2023). Percepción estudiantil sobre el uso de una plataforma colaborativa de realidad virtual en el aprendizaje de asignaturas de ciencias. *Educación*, 32(63), 179–203. <https://doi.org/10.18800/educacion.202302.A009>

