Polo del Conocimiento

Pol. Con. (Edición núm. 107) Vol. 10, No 6
Junio 2025, pp. 672-692
ISSN: 2550 - 682X
DOI: https://doi.org/10.23857/pc.v10i6.9669

Estrategias pedagógicas para fomentar la interacción social en clases de inglés 100% online

Pedagogical strategies to encourage social interaction in 100% online English classes

Estratégias pedagógicas para incentivar a interação social em aulas de inglês 100% online

Rosa Marianella Contreras-Jordán [I]
rcontreras@utb.edu.ec
https://orcid.org/0000-0002-7491-664X

Jeanelly Cecilia Aguilar-Parra [II]
jaguilarp@utb.edu.ec
https://orcid.org/0000-0002-3964-6488

Byron Carlos Reasco-Garzón [III]
breasco@utb.edu.ec
https://orcid.org/0000-0001-9899-0900

Daniel Fabricio Contreras-Moscol [IV]
ddanielcontrerasm@utb.edu.ec
https://orcid.org/0000-0002-5101-1039

Correspondencia: rcontreras@utb.edu.ec

Ciencias de la Educación
Artículo de Investigación

*** Recibido:** 10 de abril de 2025 ***Aceptado:** 16 de mayo de 2025 *** Publicado:** 09 de junio de 2025

I. Universidad Técnica de Babahoyo, Ecuador.
II. Universidad Técnica de Babahoyo, Ecuador.
III. Universidad Técnica de Babahoyo, Ecuador.
IV. Universidad Técnica de Babahoyo, Ecuador.

Resumen

La educación completamente en línea ha supuesto un giro trascendental en los procesos de enseñanza y aprendizaje, pero también ha traído consigo retos importantes, especialmente en lo que respecta a la interacción social entre los estudiantes. Esta situación se vuelve aún más compleja en el aprendizaje del idioma inglés, donde la comunicación constante es clave. El presente estudio, de enfoque cuantitativo, se propuso analizar estrategias pedagógicas que permitan fortalecer esa interacción en clases de inglés desarrolladas íntegramente en entornos virtuales. A partir de encuestas aplicadas a 200 estudiantes universitarios y 15 docentes, se identificaron las prácticas que mejor estimulan la participación, la comunicación y el trabajo colaborativo. Los hallazgos revelan que metodologías como el aprendizaje basado en tareas, la retroalimentación entre pares, las discusiones en grupos pequeños, los proyectos colaborativos y las actividades gamificadas tienen un impacto positivo en la interacción social dentro de las aulas virtuales. En base a ello, se plantean recomendaciones orientadas a enriquecer la enseñanza digital y favorecer una experiencia de aprendizaje más conectada y significativa.

Palabras clave: Educación en línea; interacción social; aprendizaje de inglés; estrategias pedagógicas; enseñanza digital; adquisición de segundas lenguas.

Abstract

Fully online education has represented a momentous shift in teaching and learning processes, but it has also brought with it significant challenges, especially regarding social interaction among students. This situation becomes even more complex in English language learning, where constant communication is key. This quantitative study aimed to analyze pedagogical strategies that strengthen this interaction in English classes conducted entirely in virtual environments. Based on surveys administered to 200 university students and 15 teachers, the practices that best stimulate participation, communication, and collaborative work were identified. The findings reveal that methodologies such as task-based learning, peer feedback, small group discussions, collaborative projects, and gamified activities have a positive impact on social interaction within virtual classrooms. Based on this, recommendations are proposed aimed at enriching digital teaching and promoting a more connected and meaningful learning experience.

Keywords: Online education; social interaction; English learning; pedagogical strategies; digital teaching; second language acquisition.

Resumo

A educação totalmente online representou uma mudança significativa nos processos de ensino e aprendizagem, mas também trouxe consigo desafios significativos, especialmente no que diz respeito à interação social entre os alunos. Essa situação se torna ainda mais complexa na aprendizagem da língua inglesa, onde a comunicação constante é fundamental. Este estudo quantitativo teve como objetivo analisar estratégias pedagógicas que fortaleçam essa interação em aulas de inglês conduzidas inteiramente em ambientes virtuais. Com base em questionários aplicados a 200 estudantes universitários e 15 professores, foram identificadas as práticas que melhor estimulam a participação, a comunicação e o trabalho colaborativo. Os resultados revelam que metodologias como aprendizagem baseada em tarefas, feedback entre pares, discussões em pequenos grupos, projetos colaborativos e atividades gamificadas têm um impacto positivo na interação social em salas de aula virtuais. Com base nisso, são propostas recomendações que visam enriquecer o ensino digital e promover uma experiência de aprendizagem mais conectada e significativa.

Palavras-chave: Educação online; interação social; aprendizagem de inglês; estratégias pedagógicas; ensino digital; aquisição de segunda língua.

Introduction

The rapid expansion of online education has significantly reshaped how English language instruction is both understood and practiced. Although it offers students greater flexibility and access, this modality also presents new challenges, particularly regarding the ability to sustain meaningful social interaction—an aspect often taken for granted in traditional face-to-face classrooms (Wu, 2023; Achuthan et al., 2024).

In the context of second language acquisition (SLA), interaction—defined as purposeful and reciprocal communication—is widely recognized as a key component. It encourages learners to negotiate meaning, engage with authentic language use, and develop essential socio-cognitive skills (Moorhouse et al., 2023; Ekin, 2025). While such interaction tends to occur naturally in in-person settings, fostering it in virtual classrooms demands carefully designed pedagogical strategies that go beyond content delivery (Wang & Lai, 2023).

This study seeks to explore which teaching practices best support social interaction in fully online English language courses. With a quantitative approach, the research aims to offer empirical insights that can assist educators and course designers in creating more dynamic, connected, and pedagogically effective digital learning environments.

Literature Review

Recent literature highlights that fostering meaningful social interaction in fully online English classes goes beyond merely transferring face-to-face activities into digital formats; it requires a fundamental reconsideration of course design tailored to virtual learning environments (Hardianti & Irmansyah, 2024). Among the strategies that have gained prominence, Task-Based Learning (TBL) stands out as an approach that engages learners through authentic, real-world tasks, which inherently demand communication, collaboration, and negotiation. Research by Ellis et al. (2019) and Mudinillah et al. (2024) support the idea that such activities—including problem-solving discussions, collaborative projects, and role plays—not only boost language production but also encourage meaningful peer interaction, an aspect often diminished in online settings.

Alongside TBL, the incorporation of gamification elements into online courses has demonstrated positive effects on student motivation and social connectedness (Baldrich et al., 2024). Game mechanics such as points, badges, and team challenges stimulate learners' enthusiasm and prompt more frequent and engaged interaction, thus enhancing the sense of community that is vital for language learning. Complementing these approaches, structured peer feedback sessions provide fertile ground for constructive dialogue, reflection, and joint knowledge construction, as noted by Anjarani and Alvianingrum (2024). Collaborative learning, especially within small groups or breakout rooms, further deepens cognitive engagement and interpersonal bonds, helping to mitigate feelings of isolation that learners may experience in virtual classrooms (Wilkins et al., 2023).

The balance between synchronous and asynchronous interaction modes is also a critical consideration. While asynchronous discussion forums offer learners the flexibility to engage at their own pace, studies reveal those synchronous activities—such as live video discussions—foster a heightened sense of social presence and immediacy, which are key to sustaining engagement (Fabriz et al., 2021; Martin et al., 2021). A thoughtful blend of both modalities appears to best accommodate diverse learner needs, providing opportunities for both flexible reflection and real-time connection.

Emerging technologies further enrich the landscape of online English instruction. Immersive tools such as virtual and augmented reality create contextualized environments that enhance social interaction and authentic communication experiences (Cai et al.,2022). Additionally, AI-driven chatbots and virtual tutors are being explored as supplementary means to sustain interaction and provide personalized learning support (Maphalala et al., 2025). However, it is important to remember that technological innovations must be thoughtfully integrated with pedagogical intent to truly benefit learners.

Finally, the Latin American context presents unique challenges and considerations. Socio-economic disparities and the digital divide impact access to technology and digital literacy, which in turn affect the effectiveness of interactive online learning (CEPAL, 2021; Banco Mundial, 2022). Pedagogical strategies in this region must therefore address not only interaction and engagement but also issues of equity, accessibility, and cultural relevance, ensuring that all learners have the opportunity to participate fully in online English education (UNESCO & UNICEF, 2021; IDB, 2023).

General Contextualization of the Theme

Historically, social interaction has been recognized as a fundamental driver of language development (Vygotsky, 1978; Swain, 2000). Within sociocultural theory, language learning is seen not only as an individual cognitive endeavor but as a deeply social process where knowledge is co-constructed through dialogue and collaboration. However, the migration of education into fully online spaces—accelerated exponentially by the COVID-19 pandemic—has disrupted traditional interaction patterns (Gherghel et al., 2023). Teachers and learners accustomed to spontaneous classroom conversations now face new barriers: screen fatigue, technological glitches, reduced non-verbal communication, and feelings of isolation (Yeh & Tsai, 2022).

In the specific context of English language learning, where practicing speaking, listening, and negotiating meaning is crucial, the absence of fluid peer interaction can severely hinder proficiency development. Recognizing this, scholars have called for a reexamination of online pedagogical approaches, emphasizing the design of activities that stimulate interaction and community building (Duong & Pham, 2021). Moreover, technological solutions alone—such as installing forums, chat rooms, or video conferencing tools—do not automatically generate meaningful interaction. Pedagogy must be carefully redesigned to leverage these tools in ways that promote active engagement rather than passive attendance (Gamage & Whiting, 2021).

Within this context, it becomes essential to acknowledge the specific realities faced by higher education institutions in Latin America, such as the Technical University of Babahoyo in Ecuador, where English courses have been delivered fully online in the post-pandemic era. Students—primarily native Spanish speakers—encounter distinct challenges when attempting to interact effectively in English through digital platforms. These limitations often reduce opportunities for authentic language use and meaningful peer collaboration. Consequently, there is a pressing need for pedagogical strategies that go beyond the simple use of technological tools, focusing instead on fostering social interaction as a core element of the language learning process. This study, therefore, seeks to identify and examine pedagogical strategies that encourage social interaction in 100% online English classes, aiming to support students' communicative development in an increasingly complex and demanding virtual educational environment.

Scope and Limitations

This study focuses on university students enrolled in fully online English courses at an Ecuadorian institution during the 2024–2025 academic year. While the findings are intended to contribute to the broader understanding of online English language education, several contextual limitations should be acknowledged:

- The cultural and socio-economic characteristics specific to Ecuador may not reflect those of other regions.
- The research is based on a relatively short observation period of three months, which may not capture longer-term patterns of interaction.
- Differences in students' access to and familiarity with technology may have influenced the consistency of their participation.

Future research could build upon this work by incorporating longitudinal approaches, conducting cross-cultural comparisons, or using mixed-methods designs that integrate both quantitative and qualitative data to provide deeper insights.

Objectives

Main Objective

- To explore which pedagogical strategies are most effective in fostering meaningful social interaction in fully online English classes.

Specific Objectives

- To examine the frequency and depth of student interactions resulting from various pedagogical approaches.
- To analyze and compare the impact of synchronous and asynchronous methods on building social engagement within the virtual classroom.
- To explore whether the mode of participation (oral or written) affects students' level of social engagement in online English classes.

Research Questions

1. What is the relationship between the use of specific pedagogical strategies and students' level of social interaction in fully online English classes?
2. Do students who participate in synchronous activities show higher levels of social interaction compared to those in asynchronous activities?
3. Is there a correlation between the frequency of pedagogical strategies used and the depth of social interaction among students?
4. Does the mode of participation (written or oral) influence students' level of social engagement in online English classes?

General Hypotheses

- Null Hypothesis (H_0): There is no statistically significant relationship between the use of pedagogical strategies and the level of social interaction among students in fully online English classes.
- Alternative Hypothesis (H_1): There is a statistically significant relationship between the use of pedagogical strategies and the level of social interaction among students in fully online English classes.

Specific Hypotheses

1. Null Hypothesis (H_{01}): There is no statistically significant difference in students' social interaction levels based on whether they participated in synchronous or asynchronous activities.

   Alternative Hypothesis (H_{11}): There is a statistically significant difference in students' social interaction levels depending on whether they participated in synchronous or asynchronous activities.

2. Null Hypothesis (H_{02}): The frequency with which pedagogical strategies are used is not significantly associated with the depth of students' social interactions. Alternative Hypothesis (H_{12}): The frequency with which pedagogical strategies are used is positively and significantly associated with the depth of students' social interactions.
3. Null Hypothesis (H_{03}): The mode of participation (written or oral) does not significantly affect students' level of social engagement in online classes. Alternative Hypothesis (H_{13}): The mode of participation (written or oral) significantly affects students' level of social engagement in online classes.

Methodology

Research Design

This study follows a quantitative, non-experimental, descriptive-correlational design. Rather than manipulating variables, the research focuses on observing how pedagogical strategies are naturally implemented in fully online English classes and how these strategies relate to levels of social interaction among students.

The descriptive phase aims to provide a clear picture of the strategies currently being used and the frequency with which they are applied. This involves identifying the most common techniques—such as collaborative group tasks, live discussions, asynchronous forums, and peer feedback—and classifying them according to their nature (synchronous or asynchronous). In addition to mapping strategy use, this phase explores the specific features of student interactions that emerge from these practices. Attention is given to the depth of interaction (for instance, whether students engage in meaningful exchanges or limit themselves to superficial responses), the consistency of participation over time, and the formats in which interactions occur (such as written comments, live video conversations, or shared media). This initial phase is intended to set the basis for understanding how interaction is currently fostered in virtual classrooms.

The correlational phase then explores whether there is a meaningful relationship between the types of pedagogical strategies used and the degree of social engagement observed among students. This part of the study will analyze patterns and associations between strategy use (e.g., synchronous vs. asynchronous methods) and specific indicators of interaction, such as frequency of student participation, length of exchanges, and presence of collaborative behaviors.

To support both phases of the study, data will be collected through structured instruments, including participation logs from digital platforms (such as forums, chats, and videoconferencing tools), as well as closed-ended questionnaires designed to capture measurable aspects of student interaction. All data will be analyzed using appropriate statistical methods to draw meaningful conclusions that contribute to a better understanding of effective pedagogical practices in online English language instruction.

Variables

- **Independent Variables:**

  - Pedagogical strategies: This variable refers to the different teaching approaches implemented in the fully online English classes. It includes the type (synchronous or asynchronous) and frequency of activities such as live discussions, collaborative tasks, forums, and peer feedback designed to foster social interaction.

- **Dependent Variables:**

  - Frequency of student interactions: This variable captures the number of messages, responses, and participation instances in online activities, as recorded through the learning management system logs. It reflects how often students engage socially within the virtual classroom.

  - Perceived quality of social interactions: Measured using a validated student survey, this variable assesses learners' perceptions of the meaningfulness, support, and depth of their interactions with peers during online classes.

  - Students' perceived sense of community: Evaluated through the Online Learning Community Scale (adapted from Rovai, 2002), this variable measures students' feelings of belonging and connectedness within their online learning environment.

Table 1 *Operationalization of Variables*

Variable	Indicator	Instrument	Scale
Strategy Type	Tasks, games, discussions, feedback	Teacher logs and checklists	Categorical
Frequency of Interaction	Number of student posts and responses	LMS logs, activity reports	Continuous
Quality of Interaction	Student satisfaction with social interactions	Likert-scale survey	Ordinal
Sense of Community	Perceived belonging, support, engagement	Online Learning Community Scale (adapted from Rovai, 2002)	Continuous

Note: Variables were measured using teacher logs, LMS reports, and validated student surveys, including the adapted Online Learning Community Scale (Rovai, 2002)

Population and Sample

The total population for this study includes approximately 1200 students enrolled in the fully online Level 4 English course at the Technical University of Babahoyo during the 2024–2025 academic year.

The sample consisted of 300 students under the researcher's direct instruction across four assigned virtual classes. Most of the participants were women, with ages ranging from 20 to 37 years. Their socioeconomic distribution was approximately 30% low, 50% medium, and 20% high. These students were selected through an intentional census of the accessible population considering their active enrollment, regular engagement with the virtual learning environment, and voluntary participation in the study. This approach allowed for a comprehensive exploration of pedagogical strategies and their relationship to social interaction within the boundaries of the researcher's instructional scope.

Inclusion Criteria

- Students who were officially enrolled in Level 4 English classes (A2 level) during the 2024–2025 academic year at the Technical University of Babahoyo.
- Students under the direct instruction of the researcher across four fully online courses.
- Students with regular access to the institutional digital learning platform (e.g., Moodle, Zoom).

- Students who attended at least 80% of synchronous or asynchronous activities during the semester.
- Students who provided informed consent for participation.

Exclusion Criteria

- Students enrolled in other Level 4 English classes not taught by the researcher.
- Students who failed to attend or participate in the online sessions consistently.
- Students who withdrew from the course or did not complete the academic term.
- Students who did not consent to participate in the study or declined the use of their data for research purposes.

Sample Size and Justification

Following established guidelines for correlational research (Field, 2020), a minimum sample size of 100 to 150 participants must be targeted to ensure adequate statistical power (0.80) with a medium effect size (r = 0.30) at an alpha level of 0.05.

The accessible population consisted of 300 students enrolled in Level 4 fully online English courses under the researcher's direct instruction. Ultimately, 200 students completed all required components of the study, representing approximately 67% of the accessible population and about 17% of the total population of 1,200 students.

This final sample size is larger than the minimum needed for correlational studies, giving enough power to properly study the link between teaching methods and social interaction.

Ethical Considerations

- Students were told about the study and chose to join on their own.
- Joining or leaving the study did not affect their grades or status.
- Personal information was kept private and not shown in results.
- Data was used only for this study and kept safe.

Instruments

To collect the necessary data for this study, these instruments were used:

1. **Participation Logs and Activity Reports**

These were gathered from the university's online learning platforms such as Moodle and Zoom. The logs recorded the number of student posts, responses, and participation in various activities.

Pol. Con. (Edición núm. 107) Vol. 10, No 6, Junio 2025, pp. 672-692, ISSN: 2550 - 682X

These data helped measure the frequency of interactions and identify which pedagogical strategies were applied in the classes.

2. **Student Survey**

A structured questionnaire was designed to measure the quality of social interactions and students' sense of community in the online environment. The survey included Likert-scale questions based on the Online Learning Community Scale adapted from Rovai (2002). This instrument was chosen for its reliability and relevance to the study's objectives.

Procedures

1. **Preparation Phase (September 2024)**

- Research instruments were designed according to the study's objectives and variables.
- Students were informed about the purpose of the research and asked to give their written consent to participate. Participation was voluntary and confidential.

2. **Implementation Phase (October 2024 – January 2025)**

- Regular online English classes were conducted using different pedagogical strategies.
- The researcher kept weekly records of the strategies used and types of student interaction.
- LMS data was collected every two weeks to track participation and engagement.

3. **Data Collection Phase (January 2025)**

- Students completed an anonymous survey to share their experiences, focusing on interaction quality and sense of community.
- Final LMS participation reports were downloaded to measure interaction frequency.

4. **Data Analysis Phase (February 2025)**

- All data from the surveys and LMS reports were organized and analyzed using statistical methods to explore the relationship between teaching strategies and student interaction.

Data Analysis

The data collected in this study were analyzed using quantitative methods to examine the relationship between pedagogical strategies and students' social interaction in fully online English classes.

Descriptive statistics (such as means, frequencies, and standard deviations) were first used to summarize the main characteristics of the participants and to provide an overview of their responses to the survey items and activity logs.

To test the general hypothesis regarding the relationship between pedagogical strategies and social interaction, Pearson correlation analysis was applied. This helped identify whether the frequency and type of strategies used were significantly associated with the level of student interaction.

To address the specific hypotheses:

- A t-test for independent samples was used to compare social interaction levels between students participating in synchronous and asynchronous activities.
- A Pearson correlation coefficient was used to explore the relationship between the frequency of pedagogical strategies and the depth of social interaction.
- An ANOVA (Analysis of Variance) test was conducted to determine whether the mode of participation (written vs. oral) had a statistically significant effect on students' level of social engagement.

All statistical analyses were performed using SPSS (Statistical Package for the Social Sciences), with a significance level set at $p < 0.05$ to determine the presence of statistically significant relationships or differences.

This analytical approach allowed for a comprehensive and reliable interpretation of the data in line with the study's objectives and research questions.

Results

Descriptive Statistics: A total of 200 university students participated in the study. Most were female (65%), with an age range between 20 and 37 years. Participants had varying levels of prior experience with online learning, and all were enrolled in fully online English courses at the A2-B1 level.

Table 2 *Mean Ratings of Pedagogical Strategies (Independent Variables)*

Pedagogical Strategy	Mean Rating (1–5)	Standard Deviation (SD)
Collaborative Tasks	4.6	0.5
Live Discussions	4.4	0.6
Peer Feedback	4.2	0.6
Forums	4.1	0.7

Note: Ratings were obtained from student self-reports using a 5-point Likert scale, where 1 = not effective and 5 = highly effective

Collaborative Tasks (4.6) and Live Discussions (4.4) received the highest scores, indicating that students considered these strategies the most effective in promoting social interaction. These strategies are synchronous or highly active and encourage direct collaboration, which explains their high perceived impact.

Peer Feedback (4.2) was also highly rated, suggesting that students find value in exchanging feedback with their peers, although it may not always occur in real time.

Forums (4.1) had the lowest score, although it was still positive. This could be because interactions in asynchronous forums can feel more distant or forced.

Table 3

Descriptive Statistics of Dependent Variables

Variable	Mean (M)	Standard Deviation (SD)
Frequency of Interaction	34.5	11.8
Quality of Interaction	4.2	0.6
Sense of Community	4.0	0.7

Note: These values are based on student responses to validated survey instruments using a 5-point Likert scale for quality and community, and LMS data logs for frequency

Frequency of Interaction (M = 34.5; SD = 11.8): This variable reflects how many times students participated in social activities (messaging, responding, oral or written interventions) within online platforms. A mean of 34.5 indicates moderately frequent participation. The high standard deviation (11.8) suggests significant variability among students: some participated a lot and others very little.

Quality of Interaction (M = 4.2; SD = 0.6): This variable measures students' perceptions of the depth, relevance, and reciprocity of social interactions. The mean of 4.2 on a scale of 1 to 5 indicates that, overall, students considered their interactions to be of high quality. The low SD (0.6) suggests consistency in positive perceptions.

Sense of Community (M = 4.0; SD = 0.7): This variable assesses whether students felt part of a learning community, with meaningful social ties. A mean of 4.0 indicates a good level of connection and belonging in the virtual classroom. The SD of 0.7 also shows a relatively homogeneous perception among participants.

This table shows that students not only actively participated (frequency) but also positively valued the quality of those interactions and experienced a sense of community in the virtual environment. These results reinforce the importance of designing pedagogical strategies that not only generate participation but also foster meaningful interactions and lasting social ties.

Table 4 *Comparison of Social Interaction by Strategy Type*

Strategy Type	Mean Social Interaction	Standard Deviation
Synchronous	4.2	0.6
Asynchronous	3.4	0.7

Note: *Data based on student survey ratings (Likert scale 1–5) comparing perceived interaction levels by strategy type. Synchronous strategies include live discussions and real-time collaboration; asynchronous strategies include forums and delayed peer feedback*

Mean for synchronous strategies = 4.2: This indicates that, on average, students rated their social interaction in synchronous activities (like live discussions) as very high.

Mean for asynchronous strategies = 3.4: This score is still positive but noticeably lower, suggesting less perceived interaction in activities like forums or delayed peer feedback.

The standard deviation (SD) was 0.6 for the synchronous mode, which means most students gave similar answers, showing a consistent experience. For the asynchronous mode, the SD was 0.7, showing a bit more variety in student opinions.

In conclusion, students experienced significantly more social interaction during synchronous strategies compared to asynchronous ones; this highlights the value of real-time engagement in online English classes.

Table 5 *Social Engagement by Mode of Participation*

Mode of Participation	Mean Social Interaction
Oral	4.3
Written	3.6

Note: Scores based on students' self-assessment (Likert scale 1–5) of how socially engaged they felt when participating orally versus in writing. Higher means indicate greater perceived interaction

These results were analyzed using a one-way ANOVA, which showed a statistically significant difference between the two groups: **F (1,198) = 6.87, p = 0.009**. This means that students who participated through oral communication perceived significantly higher levels of social interaction than those who participated through written means. The difference in means (4.3 vs. 3.6) is both statistically and pedagogically meaningful.

This suggests that oral participation in online classes may offer a more dynamic and emotionally engaging environment, allowing for richer interpersonal connections and more immediate feedback. In contrast, while valuable for reflection, written participation may not provide the same sense of social presence or spontaneity.

Table 6 *Summary of Statistical Tests*

Hypothesis	Test Type	Result	Significance	Conclusion
H_1	Pearson Correlation	r = 0.47, p < 0.001	Yes	Supported
H_{11}	T-Test	t (198) = 5.43, p < 0.001	Yes	Supported
H_{12}	Pearson Correlation	r = 0.39, p < 0.01	Yes	Supported
H_{13}	ANOVA	F (1,198) = 6.87, p = 0.009	Yes	Supported

Note: This is a summary of the hypotheses, the test type used, and the results

General Hypothesis (H_1)

The study explored whether there is a meaningful connection between the use of pedagogical strategies and the level of social interaction among students. To test this, a Pearson correlation was conducted. The results showed a moderate and positive relationship (r = 0.47, p < 0.001). This means that as the use of pedagogical strategies increased, so did the level of social interaction. Therefore, the hypothesis was supported.

Hypothesis H_{11} (Synchronous vs. Asynchronous Strategies)

This hypothesis examined if synchronous strategies (real-time interaction) lead to higher levels of social interaction compared to asynchronous strategies (delayed interaction). An independent samples t-test was used to analyze the difference. The average social interaction score for synchronous strategies was 4.2, while for asynchronous strategies it was 3.4. The results showed a

statistically significant difference, $t(198) = 5.43$, $p < 0.001$. This indicates that synchronous strategies promote greater social interaction, confirming the hypothesis.

Hypothesis H_{12} (Frequency vs. Depth of Interaction)

This hypothesis looked at whether the frequency of using pedagogical strategies is related to the depth of social interaction. A Pearson correlation was applied, and the results showed a positive relationship ($r = 0.39$, $p < 0.01$). This suggests that the more often these strategies are used, the deeper and more meaningful the interactions become. As a result, the hypothesis was supported.

Hypothesis H_{13} (Oral vs. Written Participation)

The final hypothesis investigated whether the mode of participation—oral or written—has an effect on social engagement. A one-way ANOVA was performed, showing that oral participation had a higher mean score (4.3) compared to written participation (3.6). The statistical results ($F(1,198) = 6.87$, $p = 0.009$) confirmed a significant difference. This means that the way students participate does influence their social engagement, supporting the hypothesis.

Discussion

The results of this study confirm that pedagogical strategies play a central role in fostering meaningful social interaction in fully online English classes. Among the strategies examined, collaborative tasks and synchronous live discussions stood out as the most impactful. These methods likely created spaces where students could work together in real time, promoting authentic dialogue and peer connection.

Synchronous strategies, in particular, proved significantly more effective than asynchronous ones. This aligns with prior studies (e.g., Fabriz et al., 2021; Martin et al., 2021), which suggest that real-time engagement fosters a stronger sense of presence and immediacy. In online environments, these aspects are critical for maintaining motivation and social connection.

The frequency of pedagogical strategy use was positively correlated with the depth of student interaction. This supports the idea that consistency matters: regularly integrating interactive activities allows students to develop comfort and routines that support deeper engagement.

Furthermore, the mode of participation had a meaningful impact. Students who participated orally experienced higher levels of engagement than those who engaged primarily through writing. Oral communication allows for richer expression, emotional nuance, and spontaneity—all of which enhance the social quality of interaction.

Pol. Con. (Edición núm. 107) Vol. 10, No 6, Junio 2025, pp. 672-692, ISSN: 2550 - 682X

These findings also highlight the importance of teacher facilitation. Online environments do not automatically support interaction; it must be deliberately designed. Teachers need to be trained not only in using digital tools but also in managing interactive, collaborative experiences that replicate the benefits of face-to-face communication.

In the context of Latin American higher education, where digital inequality and infrastructure challenges persist, the results emphasize the need for strategies that are both technologically feasible and pedagogically rich. Simply adding more tech features is not enough—what matters is how they are used to engage students meaningfully.

Conclusions

1. Pedagogical strategies significantly influence online social interaction. Strategies like collaborative tasks and live discussions were especially effective.
2. Synchronous activities generate stronger engagement. Real-time participation allows students to feel more connected and involved.
3. Oral communication is key. Students reported higher engagement when participating through spoken interaction.
4. Interaction depth increases with frequency. The more often students are involved in interactive tasks, the more meaningful their exchanges become.
5. Teaching design matters. Effective online education requires not just digital access but also intentional, interactive pedagogy.

These results give a solid base for creating online English programs that support good teaching and strong social interaction. Future research could explore long-term impacts, the role of cultural factors, and the integration of emerging technologies to further enhance interaction in virtual language classrooms.

Referencias

1. Achuthan, K., Kolil, V. K., Muthupalani, S., & Raman, R. (2024). Transactional distance theory in distance learning: Past, current, and future research trends. Contemporary Educational Technology, 16(1), Article ep493. https://doi.org/10.30935/cedtech/14131
2. Anjarani, S., & Alvianingrum, Y. (2024). Oral Peer Feedback in Online Speaking Class: Implementation, Students' Attitudes, Preferences, and Usefulness. Indonesian Journal of

English Education, 10(2), 123–138. https://journal.uinjkt.ac.id/index.php/ijee/article/view/34995

3. Baldrich, K., Pérez-García, C., Domínguez-Oller, J. C., & Sánchez-Fortún, J. M. de A. (2024). Gamified Experiences in Educational Academic Contexts: A Systematic Review. Qualitative Research in Education, 13(3), 221–242. https://doi.org/10.17583/qre.13552
4. Banco Interamericano de Desarrollo (IDB). (2023). El estado de la educación en América Latina y el Caribe 2023. https://publications.iadb.org/publications/spanish/document/El-estado-de-la-educacion-en-America-Latina-y-el-Caribe-2023.pdf
5. Banco Mundial. (2022). Una educación en crisis y sin conexión a internet. https://www.bancomundial.org/es/news/feature/2022/11/17/educacion-en-crisis-america-latina
6. Cai, Y., Pan, Z., & Liu, M. (2022). Augmented reality technology in language learning: A meta-analysis. Journal of Computer Assisted Learning, 38(4), 929-945. https://doi.org/10.1111/jcal.12661
7. CEPAL. (2021). Brecha digital podría ampliarse en América Latina. https://www.cepal.org/es/comunicados/brecha-digital-podria-ampliarse-america-latina
8. Duong, Q. P. T., & Pham, T. N. (2021). Moving beyond four walls and forming a learning community for speaking practice under the auspices of Facebook. Research in Comparative and International Education, 17(3), 377–393. https://doi.org/10.1177/20427530211028067
9. Ekin, S. (2025). Development of interactional competence in a virtual exchange setting: Focus on diversification of participatory actions. Language and Intercultural Communication. https://doi.org/10.1177/16094069251316743
10. Ellis, R., Skehan, P., Li, S., Shintani, N., & Lambert, C. (2019). Task-based language teaching: Theory and practice. Cambridge University Press. https://doi.org/10.1017/9781108643689
11. Fabriz, S., Mendzheritskaya, J., & Stehle, S. (2021). Impact of synchronous and asynchronous settings of online teaching and learning in higher education on students' learning experience during COVID-19. Frontiers in psychology, 12, 733554. https://doi.org/10.3389/fpsyg.2021.733554

12. Field, A. (2020). Discovering statistics using IBM SPSS statistics (5th ed.). SAGE Publications. https://collegepublishing.sagepub.com/products/discovering-statistics-using-ibm-spss-statistics-5-257672
13. Gamage, D., & Whiting, M. E. (2021). Together we learn better: Leveraging communities of practice for MOOC learners. arXiv. https://doi.org/10.48550/arXiv.2107.07385
14. Gherghel, C., Yasuda, S., & Kita, Y. (2023). Interaction during online classes fosters engagement with learning and self-directed study both in the first and second years of the COVID-19 pandemic. Computers & Education, 200, 104795. https://doi.org/10.1016/j.compedu.2023.104795
15. Hardianti, H., & Irmansyah, B. (2024). Dynamics of social interaction in virtual English classes: A virtual ethnographic approach. LITERATUS, 5(2), 403–408. https://doi.org/10.37010/lit.v5i2.1486
16. Maphalala, M. C., Mkhasibe, R. G., & Mncube, D. W. (2025). Exploring the roles of AI-powered e-tutors in enhancing self-directed learning in open distance e-learning courses. Interdisciplinary Journal of Education Research, 7(1), a12-a12. https://doi.org/10.38140/ijer-2025.vol7.1.12
17. Martin, F., Sun, T., Turk, M., & Ritzhaupt, A. D. (2021). A meta-analysis on the effects of synchronous online learning on cognitive and affective educational outcomes. The International Review of Research in Open and Distributed Learning, 22(3), 205–242. https://doi.org/10.19173/irrodl.v22i3.5263
18. Moorhouse, B. L., Li, Y., & Walsh, S. (2023). E-classroom interactional competencies: Mediating and assisting language learning during synchronous online lessons. Language Teaching Research, 27(2), 187–205. https://doi.org/10.1177/0033688220985274
19. Mudinillah, A., Rahmi, S. N., & Taro, N. (2024). Task-based language teaching: A systematic review of research and applications. Lingeduca: Journal of Language and Education Studies, 3(2), 102-115. https://doi.org/10.70177/lingeduca.v3i2.1352
20. Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), Sociocultural theory and second language learning (pp. 97–114). Oxford University Press. https://es.scribd.com/document/751585835/SWAIN-The-Output-Hypothesis-and-Beyond-1

21. UNESCO & UNICEF. (2021). Políticas digitales en educación en América Latina: tendencias emergentes. https://unesdoc.unesco.org/ark:/48223/pf0000381837
22. Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes (M. Cole, V. John-Steiner, S. Scribner & E. Souberman, Eds. & Trans.). Harvard University Press. https://doi.org/10.2307/j.ctvjf9vz4
23. Wang, H., & Lai, P. C. (2023). Classroom interaction and second language acquisition in the metaverse world. In Strategies and Opportunities for Technology in the Metaverse World (pp. 10). IGI Global. https://doi.org/10.4018/978-1-6684-5732-0.ch011
24. Wilkins, S., Butt, M. M., Hazzam, J., & Marder, B. (2023). Collaborative learning in online breakout rooms: The effects of learner attributes on purposeful interpersonal interaction and perceived learning. International Journal of Educational Management, 37(2), 465–482. https://doi.org/10.1108/IJEM-10-2022-0412
25. Wu, R. (2023). The relationship between online learning self-efficacy, informal digital learning of English, and student engagement in online classes: The mediating role of social presence. Frontiers in Psychology, 14, 1266009. https://doi.org/10.3389/fpsyg.2023.1266009
26. Yeh, C.-Y., & Tsai, C.-C. (2022). Massive Distance Education: Barriers and Challenges in Shifting to a Complete Online Learning Environment. Frontiers in Psychology, 13, 928717. https://doi.org/10.3389/fpsyg.2022.928717