Multidisciplinary Collaborative Journal
ISSN: 3073-1356

DOSO EDITORIAL CIENTÍFICA

Article

Implementing the Flipped Classroom Model in University English Courses: Effects on Student Engagement and Speaking Performance

Implementación del Modelo de Aula Invertida en Cursos Universitarios de Inglés: Efectos sobre el Compromiso Estudiantil y el Desempeño Oral

Italo Rigoberto Carabajo Romero [1]*

[1] Universidad Agraria del Ecuador, Ecuador, Milagro; https://orcid.org/0000-0002-9592-1659

* Correspondence: icarabajo@uagraria.edu.ec

https://doi.org/10.70881/mcj/v4/n2/151

Citation: Carabajo Romero, I. R. (2026). Implementación del Modelo de Aula Invertida en Cursos Universitarios de Inglés: Efectos sobre el Compromiso Estudiantil y el Desempeño Oral. *Multidisciplinary Collaborative Journal*, *4*(2), 67-78. https://doi.org/10.70881/mcj/v4/n2/151

Received: 03/03/2026
Revised: 15/04/2026
Accepted: 20/04/2026
Published: 28/04/2026

Abstract: The flipped classroom model has emerged as an innovative pedagogical strategy that redistributes instructional time by shifting content exposure to out-of-class settings and reserving in-class time for interactive practice activities. This quasi-experimental study aimed to evaluate the effects of implementing the flipped classroom model on student engagement and A1-level English speaking performance at the Language Center of the Universidad Agraria del Ecuador (UAE). Sixty students participated, distributed into an experimental group (n = 30) and a control group (n = 30). A CEFR-aligned oral pre-test and post-test, an analytical speaking rubric, and a Likert-scale student engagement questionnaire were administered. Results showed significant differences in favor of the experimental group in both speaking performance ($t(58) = 7.83$, $p < .001$, $d = 2.27$) and student engagement ($t(58) = 11.27$, $p < .001$, $d = 2.90$). It is concluded that the flipped classroom model is an effective strategy to improve oral performance and student engagement in university English courses in the Ecuadorian context.

Keywords: flipped classroom; student engagement; English speaking performance; language teaching; university education

Resumen: El modelo de aula invertida ha emergido como una estrategia pedagógica innovadora que redistribuye el tiempo instruccional, trasladando la exposición de contenidos al entorno externo al aula y reservando el tiempo presencial para actividades interactivas de práctica. El presente estudio cuasi-experimental tuvo como objetivo evaluar los efectos de la implementación del modelo de aula invertida sobre el compromiso estudiantil y el desempeño oral en inglés de nivel A1 en el Centro de Idiomas de la Universidad Agraria del Ecuador. Participaron 60 estudiantes distribuidos en un grupo experimental (n = 30) y un grupo control (n = 30). Se aplicaron un pre-test y post-test de producción oral alineados al MCER, una rúbrica analítica de speaking y un cuestionario de compromiso estudiantil con escala Likert. Los resultados mostraron diferencias significativas en favor del grupo experimental tanto en el desempeño oral ($t(58) = 7.83$, $p < .001$, $d = 2.27$) como en el compromiso estudiantil ($t(58) = 11.27$, $p < .001$, $d = 2.90$). Se concluye que el modelo de aula invertida es una estrategia efectiva para mejorar el rendimiento oral y el involucramiento estudiantil en inglés universitario en el contexto ecuatoriano.

Palabras clave: aula invertida; compromiso estudiantil; desempeño oral en inglés; enseñanza de idiomas; educación universitaria

1. Introduction

The teaching of English as a Foreign Language (EFL) in Latin American university settings faces structural challenges related to limited instructional time, student heterogeneity, and scarce opportunities for authentic oral practice during face-to-face sessions (Pratiwi et al., 2022). Against this backdrop, the flipped classroom model has gained considerable academic attention as a pedagogical alternative that reorganizes the space and time of learning, enabling students to access instructional content outside the classroom typically through digital resources and use class time for collaborative activities of greater cognitive complexity (Kilavuz, 2024).

The flipped classroom model, originally conceptualized by Bergmann and Sams (2012) and theoretically grounded in Bloom's taxonomy and active learning, proposes that initial content exposure takes place autonomously, while the classroom becomes a space for practice, feedback, and social knowledge construction (Zhong, 2024). This approach has demonstrated consistent benefits across various disciplines and educational levels, including improvements in academic performance, motivation, and self-regulated learning (Cigdem & Oncu, 2025; Omarchevska et al., 2025).

In the specific field of English language teaching, recent research reports that the flipped classroom promotes the development of oral communicative competence, increases willingness to communicate, and reduces linguistic anxiety (Dariyemez, 2023; Li et al., 2025). Its positive impact on student engagement understood as the cognitive, emotional, and behavioral involvement of learners in the learning process has also been documented in higher education settings (Eltahir & Alsalhi, 2025; Chen et al., 2025). However, empirical evidence from university English contexts in Ecuador and, more broadly, in Latin America remains scarce, limiting the possibility of making informed pedagogical decisions.

The Universidad Agraria del Ecuador (UAE), through its Language Center, offers compulsory English courses to students across all degree programs, with groups beginning at the A1 level of the Common European Framework of Reference (CEFR). These students generally present low levels of prior exposure to the language and limited confidence in oral production, making student engagement and speaking performance critical variables for academic success in the subject area.

Given this context, the present study addresses the following research question: what are the effects of implementing the flipped classroom model on student engagement and A1-level English speaking performance at the UAE Language Center? Accordingly, the main objective of this study is to evaluate these effects through a quasi-experimental design with a control group and an experimental group, applying standardized instruments before and after the pedagogical intervention.

2. Materials and Methods

2.1. Research Design

The study adopted a quasi-experimental design with pre-test and post-test, featuring non-equivalent control (CG) and experimental groups (EG), given that participant assignment was not random but based on pre-established class groups (Irianti et al., 2024). This design is the most widely used in educational research when working with intact groups in real university settings, as it preserves the natural ecology of the classroom and allows control of external variables without disrupting institutional dynamics (Khodabandeh, 2025). The approach was quantitative, aimed at objectively measuring the dependent variables through standardized instruments.

2.2. Participants

The study population consisted of students enrolled in A1-level English courses at the UAE Language Center during the 2024–2025 academic cycle. The sample was selected through non-probabilistic convenience sampling, comprising two parallel groups at the same level and schedule. The experimental group (EG) consisted of 30 students who received instruction under the flipped classroom model, while the control group (CG), also composed of 30 students, continued with the traditional frontal teaching methodology. Inclusion criteria were: formal enrollment in the A1 level, access to a device with an internet connection for consuming digital materials outside the classroom, and voluntary participation confirmed through signed informed consent. Students with absenteeism exceeding 20% during the intervention period were excluded.

2.3. Variables and Instruments

The independent variable corresponded to the flipped classroom model, operationalized through a 12-week instructional sequence in which EG students accessed weekly short instructional videos (5–10 minutes) and digital reading materials prior to each face-to-face session, while class time was entirely devoted to communicative oral activities, role plays, and immediate corrective feedback. The dependent variables were English speaking performance and student engagement.

To measure speaking performance, a CEFR-aligned pre-test and post-test of oral production were designed for the A1 level, evaluating four dimensions through an analytical rubric: pronunciation, fluency, vocabulary, and comprehension, with a total score of 20 points. The rubric was validated through expert judgment (Aiken's $V > 0.80$) and piloted with a small group prior to formal administration. To measure student engagement, the questionnaire developed by Fredricks et al. (2004) was adapted to the Ecuadorian university EFL context, comprising 20 items distributed across three dimensions: cognitive engagement (7 items), emotional engagement (7 items), and behavioral engagement (6 items), using a

five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Instrument reliability was verified using Cronbach's alpha coefficient (α > 0.80).

2.4. Procedure

The intervention was carried out in three phases. During the diagnostic phase (weeks 1–2), the speaking pre-test and the initial engagement questionnaire were administered to both groups to establish the baseline and verify initial equivalence between the CG and EG. During the intervention phase (weeks 3–14), the EG received instruction under the flipped classroom model: each week, instructional videos produced with tools such as ElevenLabs and interactive materials aligned with the A1 syllabus were published on the virtual learning environment (Moodle), while face-to-face sessions were fully dedicated to oral practice through structured communicative activities. The CG continued with traditional lecture-based classes following the same syllabus. During the evaluation phase (weeks 15–16), the speaking post-test and the final engagement questionnaire were administered to both groups.

2.5. Data Analysis

Data were processed using SPSS version 26 and jamovi 2.4. Descriptive statistics (mean, standard deviation, minimum, and maximum) were calculated for both groups in the pre-test and post-test. The normality of the distribution was verified using the Shapiro-Wilk test ($n < 50$). For between-group comparisons, an independent-samples t-test was employed, while a paired-samples t-test was used for within-group comparisons (pre–post). The level of statistical significance was set at $p < .05$. Effect size was calculated using Cohen's d, interpreted as small ($d < 0.3$), medium ($0.3 \leq d < 0.8$), and large ($d \geq 0.8$) following conventional criteria (Cohen, 1988). Institutional authorization from UAE and informed consent from all participants were obtained prior to the study.

3. Results

3.1. Initial Equivalence Between Groups

Pre-test results revealed no statistically significant differences between the CG ($M = 8.43$, $SD = 1.92$) and the EG ($M = 8.67$, $SD = 1.85$) prior to the intervention ($t(58) = 0.51$, $p = .61$), confirming initial equivalence between both groups. Similarly, the initial engagement questionnaire showed no significant differences between the CG ($M = 2.89$, $SD = 0.43$) and the EG ($M = 2.93$, $SD = 0.41$) ($t(58) = 0.38$, $p = .70$), ensuring comparability of groups at the outset of the study. These results are presented in Table 1.

Table 1

Descriptive Statistics of Pre-Test by Group

Variable	Group	M	SD	p
Speaking pre-test	Control	8.43	1.92	.61
	Experimental	8.67	1.85	
Engagement pre-test	Control	2.89	0.43	.70
	Experimental	2.93	0.41	

Note. M = mean; SD = standard deviation; p = significance, independent-samples t-test.

3.2. Effects on English Speaking Performance

Upon completion of the intervention, the EG demonstrated a statistically significant improvement in the speaking post-test (M = 14.87, SD = 1.74) compared to the CG (M = 11.23, SD = 1.98) ($t(58) = 7.83$, $p < .001$). The within-group comparison in the EG between pre-test and post-test was also significant ($t(29) = 12.41$, $p < .001$), with a large effect size ($d = 2.27$), while the CG showed a more modest and medium-effect improvement ($d = 0.54$). These findings are detailed in Table 2.

Table 2

Pre-Test and Post-Test Speaking Comparison by Group

Group	M Pre	M Post	t	p	Cohen's d
Control	8.43	11.23	4.12	< .001	0.54
Experimental	8.67	14.87	12.41	< .001	2.27

Note. M Pre = pre-test mean; M Post = post-test mean; paired-samples t-test; d = Cohen's d effect size.

3.3. Effects on Student Engagement

Regarding student engagement, the EG showed significantly higher post-intervention scores (M = 4.31, SD = 0.38) compared to the CG (M = 3.12, SD = 0.45) ($t(58) = 11.27$, $p < .001$, $d = 2.90$). Dimensional analysis revealed that the largest differences were concentrated in cognitive engagement (EG: M = 4.45 vs. CG: M = 3.08; $d = 3.21$) and emotional engagement (EG: M = 4.38 vs. CG: M = 3.19; $d = 2.89$), while behavioral engagement showed a smaller yet equally significant difference (EG: M = 4.12 vs. CG: M = 3.11; $d = 2.47$). These results confirm that the implementation of the flipped classroom model generated a

positive and large-magnitude impact on students' involvement in the English learning process.

4. Discussion

4.1 Effects on English Speaking Performance

The results of the present study demonstrate that the implementation of the flipped classroom model produced a statistically significant and large improvement in English speaking performance among A1-level students in the experimental group (d = 2.27), compared to those receiving traditional instruction. This finding supports the growing body of evidence indicating that the flipped classroom enhances communicative competence by maximizing opportunities for in-class oral practice.

In line with Li et al. (2025), the improvement observed can be attributed to the reallocation of instructional time, which allows students to engage in interactive speaking activities rather than passive content reception. Similarly, Dariyemez (2023) reported that the flipped model fosters greater learner autonomy and willingness to communicate factors directly associated with improved speaking performance. In this study, students in the experimental group benefited from repeated exposure to communicative tasks, role plays, and immediate feedback, which likely contributed to their substantial gains.

Additionally, the findings align with Khodabandeh (2025), who demonstrated that combining flipped instruction with technological tools enhances oral proficiency. However, an important contribution of the present study is that significant improvements were achieved using relatively accessible resources, such as short instructional videos and a virtual learning environment (Moodle). This suggests that the effectiveness of the flipped classroom lies primarily in its pedagogical structure rather than in the sophistication of the technology employed.

4.2 Effects on Student Engagement

The flipped classroom model also had a significant and large impact on student engagement (d = 2.90), with the experimental group outperforming the control group across cognitive, emotional, and behavioral dimensions. These findings confirm that the model not only improves academic outcomes but also enhances students’ active involvement in the learning process.

Consistent with Eltahir and Alsalhi (2025), the results indicate that flipped learning environments promote higher levels of motivation and engagement by encouraging active participation and learner responsibility. The particularly strong gains in cognitive engagement observed in this study suggest that students became more invested in understanding and applying content, likely due to the requirement to prepare before class and actively participate during sessions.

Furthermore, Chen et al. (2025) highlighted that interactive and student-centered environments characteristic of the flipped classroom significantly increase engagement levels, a finding that is strongly supported by the present results. Cigdem and Oncu (2025) also emphasized that student readiness and engagement are key predictors of success in flipped courses, reinforcing the importance of well-designed pre-class materials, especially for beginner learners such as those at the A1 level.

The high levels of emotional engagement observed may be explained by the increased sense of autonomy and reduced anxiety associated with active learning environments. As noted by Omarchevska et al. (2025) and Zhong (2024), the flipped classroom facilitates self-regulated learning, allowing students to control the pace of content acquisition and arrive in class better prepared for interaction. This shift likely contributed to a more positive and engaging learning experience.

4.3 Integrated Interpretation of Findings

Taken together, the results of this study suggest that the flipped classroom model generates a synergistic effect on both speaking performance and student engagement. The improvement in speaking ability appears to be closely linked to increased engagement, as students who are more cognitively and emotionally involved are more likely to participate actively in communicative tasks.

This relationship supports the theoretical perspective that engagement functions as a mediating variable in language learning outcomes. By promoting active learning, autonomy, and interaction, the flipped classroom creates conditions that are conducive to both linguistic development and sustained student involvement. In this sense, the model addresses two critical challenges in EFL instruction: limited opportunities for oral practice and low student engagement.

4.4 Limitations and Future Research

Despite its contributions, this study presents certain limitations. The sample size (n = 60), while appropriate for the quasi-experimental design, limits the generalizability of the findings to other institutional contexts. Additionally, the absence of longitudinal data prevents determining whether the observed improvements are sustained over time.

Future research should consider larger and more diverse samples, as well as longitudinal designs to examine the long-term effects of the flipped classroom model. Moreover, the inclusion of affective variables such as language anxiety, self-efficacy, and technological readiness (Agusniati et al., 2025; Yang et al., 2025) would provide a more comprehensive understanding of the mechanisms underlying the model’s effectiveness.

5. Conclusions

The present study examined the effects of the flipped classroom model on English speaking performance and student engagement among A1-level learners at the Universidad Agraria del Ecuador. The findings provide strong empirical evidence that the implementation of this pedagogical approach leads to statistically significant and large improvements in both variables when compared to traditional instruction.

In terms of speaking performance, the results demonstrated that students exposed to the flipped classroom model achieved substantially higher post-test scores, with a large effect size. This improvement can be attributed to the increased opportunities for in-class communicative practice, which allowed learners to actively use the language in meaningful contexts. By shifting content delivery خارج the classroom and dedicating face-to-face sessions to interactive activities, the model effectively addressed one of the main limitations of EFL instruction in university settings: the restricted time available for oral production.

Regarding student engagement, the flipped classroom also produced significant gains across cognitive, emotional, and behavioral dimensions. Students in the experimental group showed higher levels of involvement, motivation, and participation, suggesting that the model fosters a more active and student-centered learning environment. The requirement to engage with instructional materials prior to class, combined with collaborative in-class activities, appears to enhance learners' responsibility for their own learning and promotes deeper cognitive processing.

Taken together, these findings highlight the potential of the flipped classroom model as an effective strategy for improving both learning outcomes and student engagement in university EFL contexts. Importantly, the results indicate that these benefits can be achieved without the need for advanced technological infrastructure, as the intervention relied on accessible tools such as short videos and a virtual learning platform.

However, this study is not without limitations. The use of a relatively small, non-random sample restricts the generalizability of the findings, and the absence of longitudinal data prevents conclusions about the long-term sustainability of the observed effects. Future research should address these limitations by incorporating larger samples, randomized designs, and follow-up assessments. Additionally, exploring the role of affective variables such as language anxiety and self-efficacy could provide further insight into the mechanisms through which the flipped classroom influences learning outcomes.

In conclusion, the flipped classroom model represents a viable and impactful pedagogical alternative for English language teaching in higher education, particularly in contexts where increasing student engagement and maximizing opportunities for oral communication are key instructional priorities.

Funding: This research received no external funding.
Acknowledgments: The authors thank the Universidad Agraria del Ecuador for its institutional support and extend their sincere gratitude to all participating students and teachers, whose commitment and participation were fundamental to the success of this research.
Data Availability Statement: Data are available upon request to the corresponding authors: icarabajo@uagraria.edu.ec
Conflicts of Interest: The authors declare no conflicts of interest.

References

Agusniati, A., Wahid, A., Nur, R. & Asdar, A. (2025). A Need Analysis MOOC for Based Instructional Material in Flipped English Speaking Class at Indonesian Higher Education. Indonesian Journal of English Language Teaching and Applied Linguistics, 10(1), 125-144

Al-Amri, A. N.A. (2022). Saudi EFL University Students' perceived Linguistic Gains and Learning Experiences in Flipped Classrooms. Arab World English Journal (AWEJ) Special Issue on CALL (8) 192-.204. DOI: https://dx.doi.org/10.24093/awej/call8.13

Avcı, M. Peer-assisted learning augmented by peer counseling to foster academic and personal development in flipped classroom. *Educ Inf Technol* **30**, 2837–2858 (2025). https://doi.org/10.1007/s10639-024-12945-z

Cigdem, H., Oncu, S. Flipping the Odds: Using Learner Readiness, Engagement, and Gamification to Predict Student Success in a Flipped Course. *TechTrends* **69**, 215–232 (2025). https://doi.org/10.1007/s11528-024-01031-3

Cladera, M. (2025). Does the flipped classroom improve undergraduate students' attitudes towards econometrics? *Innovations in Education and Teaching International*, *62*(1), 4–15. https://doi.org/10.1080/14703297.2024.2309319

Chakawodza, J. M., Nakedi, E. M., & Kizito, R. N. (2025). The Effectiveness of Flipped Classroom Pedagogy in Promoting learning engagement in Organic Chemistry in Grade-12 Students in the Context of South Africa and Covid-19. *International Journal of Science Education*, *47*(14), 1783–1809. https://doi.org/10.1080/09500693.2024.2342574

Chen, FZ., Chen, LA., Tseng, CC. *et al.* Enhancing student engagement and learning outcomes in life sciences: implementing interactive learning environments and flipped classroom models. *Discov Educ* **4**, 102 (2025). https://doi.org/10.1007/s44217-025-00501-x

Chen, J., Mokmin, N.A.M., Shen, Q. *et al.* Leveraging AI in design education: exploring virtual instructors and conversational techniques in flipped classroom models. *Educ Inf Technol* **30**, 16441–16461 (2025). https://doi.org/10.1007/s10639-025-13458-z

Dariyemez, T. (2023). Teaching Speaking Skills through Flipped Classroom Model: EFL Students' Autonomy, Willingness to Communicate, and Anxiety. *i-manager's Journal on English Language Teaching*, 13(2), 35-55. https://doi.org/10.26634/jelt.13.2.19444

Eltahir, M. E., & Alsalhi, N. R. (2025). Impact of the flipped classroom on academic achievement, motivation, and engagement: A higher education case study. Contemporary Educational Technology, 17(1), ep553. https://doi.org/10.30935/cedtech/15742

Fidan, M., & Fidan, M. (2024). The effects of video-driven discussions integrated into the flipped classroom model on learning achievement, practical performance, and higher-order thinking skills in dental education. Journal of Computer Assisted Learning, 40(1), 158–175. **https://doi.org/10.1111/jcal.12869**

Florence, .A., Kolski, T. Investigating the Flipped Classroom Model in a High School Writing Course: Action Research to Impact Student Writing Achievement and Engagement. *TechTrends* **65**, 1042–1052 (2021). https://doi.org/10.1007/s11528-021-00662-0

Irianti, L., Faridi, A., Pratama, H., & Suwandi. (2024). Flipped classroom and critical thinking on public speaking class. *Cogent Education*, *11*(1). https://doi.org/10.1080/2331186X.2024.2315815

Khodabandeh, F. (2025). Investigating the effectiveness of augmented reality-enhanced instruction on EFL learners' speaking in online flipped and face-to-face classes. *Language Teaching Research*, *29*(5), 2225-2244.

Kilavuz, F. (2024). Exploring research trends in the implementation of the flipped classroom model in educational research: A review of literature. Pedagogical Research, 9(3), em0216. https://doi.org/10.29333/pr/14730

Kreis, Y., Haas, B., Weinhandl, R., & Lavicza, Z. (2024). Transitioning from lectures to online flipped classrooms: enhancing pre-service teacher education in Luxembourg. *Cogent Education*, *11*(1). https://doi.org/10.1080/2331186X.2024.2425895

Li, S., He, J., Tao, Y., & Liu, X. (2025). The effects of flipped classroom approach in EFL teaching: Can we strategically use the flipped method to acquire communicative competence? *Language Teaching Research*, *29*(3), 1165-1188.

Mirzaei, A., Shafiee Rad, H., & Rahimi, E. (2024). Integrating ARCS motivational model and flipped teaching in L2 classrooms: a case of EFL expository writing. *Computer Assisted Language Learning*, *37*(5–6), 1136–1165. https://doi.org/10.1080/09588221.2022.2068614

Omarchevska, Y., van Leeuwen, A. & Mainhard, T. The flipped classroom: first-time student preparatory activity patterns and their relation to course performance and self-regulation. *J Comput High Educ* **37**, 1–23 (2025). https://doi.org/10.1007/s12528-024-09399-0

Pratiwi, D. I., Ubaedillah, U., Puspitasari, A., & Arifianto, T. (2022). Flipped classroom in online speaking class at Indonesian university context. International Journal of Instruction, 15(2), 697-714. https://doi.org/10.29333/iji.2022.15238a

Trung, K.N. (2024). Enhancing EFL learners' listening skills through the Flipped Classroom approach. In M. Shelley & O. T. Ozturk (Eds.), Proceedings of ICRES 2024-- International Conference on Research in Education and Science (pp. 772-786), Antalya, Turkiye. ISTES.

Wu, Y. (2023). College English Flipped Classroom Teaching System Based on Smart Sensor Network. *International Journal of Information and Communication Technology Education (IJICTE), 19*(1), 1-20. https://doi.org/10.4018/IJICTE.321129

Yang, G., Wang, Y., Zhang, Y. *et al.* An Empirical Study of AI-Supported Interleaved Training Strategy to Improve EFL Students' English Impromptu Speaking Performance, Learning Engagement, Technology Acceptance and Epistemic Network Structure. *Asia-Pacific Edu Res* **34**, 1519–1540 (2025). https://doi.org/10.1007/s40299-024-00962-y

Zhao, S., Liu, W., & Lan, Y. J. (2025). The effects of a flipped classroom approach on older adult students' performance in digital photography. *Educational Gerontology*, *51*(7), 792–808. https://doi.org/10.1080/03601277.2024.2410531

Zhong, L. (2024). Towards the pivotal factors for the influence of flipped classroom on students' self-regulated learning and EFL speaking competence. *Cogent Education*, *11*(1). https://doi.org/10.1080/2331186X.2024.2351733