Volume 3 No. 7, Juli 2026, 955 - 963
DOI: https://doi.org/10.62335

AKSIOMA

Jurnal Sains Ekonomi dan Edukasi
https://manggalajournal.org/index.php/AKSIOMA
E-ISSN 3031-9404

Enhancing English Speaking Skills Through Blended Learning: A Study on Medical Record Program

Lidia Deviga[a*]
[a] *Bhakti Hasta Mulia Madiun University, Indonesia*

INFO ARTIKEL

Riwayat Artikel:
Receied : 18-05-2026
Reised : 08-06-2026
Accepted :15-06-2026

Keywords: Blended Learning, English Speaking Skills, Medical Record Program

Corresponding Author:
devigalidya@gmail.com[*]

DOI: https://doi.org/10.62335

ABSTRACT

The globalized landscape of healthcare services demands that Medical Record professionals possess proficient English communication skills, particularly in international coding standardizations (ICD-10/ICD-11), patient admissions, and inter-professional reporting. However, non-linguistic healthcare students often face high speaking anxiety and limited classroom exposure. This study evaluates the effectiveness of a Blended Learning model in enhancing the English speaking skills of second-semester Medical Record students at Universitas Bhakti Hasta Mulia Madiun. A quantitative pre-experimental design (one-group pre-test/post-test) was deployed, involving 52 students (40 females and 12 males). The blended framework integrated synchronous face-to-face communicative simulations (medical role-playing) with asynchronous digital platforms (Learning Management System and video-recording tasks). Speaking proficiency was measured using an analytical rubric assessing pronunciation, fluency, grammar, vocabulary, and professional comprehension. Data analysis via paired sample t-test revealed a highly significant improvement from pre-test ($M = 62.45$) to post-test ($M = 78.12$), with $p < 0.001$. Female students demonstrated higher baseline scores, whereas male students exhibited a higher rate of progression. The study concludes that blended learning optimizes pedagogical flexibility, mitigates speech anxiety, and significantly upgrades professional English speaking outcomes in vocational medical contexts.

INTRODUCTION

In the era of modern health informatics, the role of a Medical Record and Health Information administrator has transitioned from localized, paper-based archiving to

digitalized, globally interconnected ecosystems. At Universitas Bhakti Hasta Mulia Madiun, the Medical Record curriculum is strategically designed to produce vocational graduates capable of navigating electronic health records (EHR), international disease classifications (such as ICD-10 and ICD-11), and medical audit compliance. Crucially, as international healthcare standards, medical tourism, and cross-border digital health exchange continue to grow in East Java and beyond, English communication competence has shifted from an optional auxiliary skill to an absolute professional necessity. In addition, the teaching methods used by teachers are often less attractive to students (Ali, 2025). These obstacles indicate deficiencies in the learning process that need to be addressed immediately. One solution that can be done by teachers is to apply learning methods that are more effective and interesting for students. To overcome some of the problems above and given the limited time to teach speaking skills, teachers need to adapt to the available methods, one of which is blended learning. (Thorne, 2013) says that the blended learning method is a teaching system that combines two methods, namely traditional learning combined with technology. Moreover, (Falah & Chairuddin, 2022) explained that blended learning is a learning method that combines face-to-face learning with online learning. Because this method is mixed, the use of the internetfor online activitieswill be applied in the learning process, which can fulfill the lack of teacher time in teaching speaking. In addition, (Graham & Dziuban, 2008) explained that the blended learning method combines traditional classroom teaching with more modern online teaching. However, many experts said that speaking is often considered a difficult skill to apply and master (Abugohar et al., 2019); (Pratiwi & Ayu, 2020). Speaking skill isnot just something that is learned or taught, however, should also become a habit. Students often find it difficult to master these skills due to they have to pay attention to various aspects such as grammar, vocabulary, fluency, pronunciation, and comprehension (Nation & Newton, 2008). Therefore, to master speaking skills, students need to practice consistently and get used to speaking in the target language. Despite its undeniable urgency, English instruction within specific vocational contexts—often termed English for Specific Purposes (ESP)—faces systemic pedagogical hurdles. Students enrolled in medical record programs are heavily grounded in hard sciences, statistical systems, and legal health regulations. Consequently, language acquisition, specifically oral production (speaking), is frequently met with cognitive resistance, lack of engagement, and debilitating speaking anxiety.

Research Problem & Context at Universitas Bhakti Hasta Mulia; Traditional face-to-face lectures often fall short of providing adequate oral practice opportunities due to strict credit hour limitations (typically 2 credits for English courses). This issue is magnified when handling large classrooms. In the second-semester Medical Record at Universitas Bhakti Hasta Mulia Madiun, there are 52 registered students. Individualized speaking feedback becomes statistically impossible within a conventional 100-minute

weekly session.

Furthermore, the demographic composition of the class presents an interesting sociolinguistic dynamic: (i) Total Students (N): 52; (ii) Female Students: 40 (76.9 %); (iii) Male Students: 12 (23.1 %)

Preliminary observations indicated that female students generally exhibited higher passive participation but expressed severe hesitation during unscripted speaking drills, while male students demonstrated variable engagement, often disrupted by fear of grammatical inaccuracy in front of a female-dominant peer group. To bridge this structural and psychological gap, a hybrid framework that extends the boundaries of the physical classroom is required.

The Promise of Blended Learning; Blended learning—defined as the systematic integration of synchronous, face-to-face instructional strategies with asynchronous, web-based digital learning modalities—offers an innovative solution. By shifting rote vocabulary drilling, medical terminology readings, and listening comprehension to an asynchronous Learning Management System (LMS), physical classroom sessions can be transformed into high-intensity, interactive communicative labs.

This study aims to investigate the empirical impact of a structured Blended Learning model on the English speaking skills of 52 second-semester Medical Record students at Universitas Bhakti Hasta Mulia Madiun, observing both collective progress and gender-based outcomes.

METHOD

This study adopted a quantitative approach using a *Pre-Experimental One-Group Pre-test – Post-test Design*. This design was selected due to the institutional structure where the 52 students belonged to a singular, cohesive intact class that could not be ethically sub-divided into control and experimental cohorts without disrupting their official curriculum sequence. The target population comprised the entire second-semester enrollment of the Medical Record Program at Universitas Bhakti Hasta Mulia Madiun. Total population sampling was used:

Table 1. Total Population Sampling

Gender	Frequency (n)	Percentage (%)	Academic Year	Semester
Female	40	76.9%	2025-2026	2
Male	12	23.1%	2025-2026	2
Total	52			

The blended learning intervention spanned 8 weeks during the mid-semester block.

Each weekly cycle was structured as follows:

- *Asynchronous Phase (Pre-class):* Students accessed the campus LMS to watch specialized short videos on medical terminologies, pronunciation guides for pathological conditions, and conversational scripts regarding hospital admissions.
- *Synchronous Phase (In-class):* The 100-minute physical session at the laboratory was completely preserved for active speaking. Students worked in pairs or small groups simulating real-life medical record scenarios (e.g., handling a difficult patient admission, defending an ICD-10 code assignment to a chief medical officer).
- *Asynchronous Phase (Post-class):* Students uploaded a 3-minute video recording simulating a specific speaking prompt to an unlisted YouTube link or directly to the LMS for personalized phonetic and grammatical feedback from the lecturer.

Instrument and Data Collection

The primary research instrument was an *Oral Proficiency Assessment Test.*

- *Pre-test:* Conducted in Week 1, requiring students to engage in an unscripted, 5-minute simulated admission desk conversation.
- *Post-test:* Conducted in Week 8, presenting an equivalent communicative task (e.g., auditing an ambiguous patient file dialogue).

The oral performances were assessed by two independent raters (inter-rater reliability coefficient r = 0.89) utilizing a modified CEFR-aligned analytical speaking rubric scoring five core domains on a scale of 1–20 (Maximum total score = 100):

1. *Pronunciation & Intonation (including medical terms)*
2. *Fluency & Coherence*
3. *Grammatical Accuracy*
4. *Vocabulary Range (Medical vs. General)*
5. *Professional Task Completion*

Statistical Data Analysis

Quantitative data were processed using descriptive statistical indicators (Mean, Standard Deviation, Variance) and inferential statistical analysis via a *Paired Sample t-Test.* The statistical significance threshold was anchored at alpha = 0.05. The mathematical representation of the paired t-test is defined by the formula:

$$t = \frac{\bar{D}}{\frac{s_d}{\sqrt{n}}}$$

Where $\bar{D}$ represents the mean of the differences between the pre-test and post-test scores, s_d is the standard deviation of the differences, and n is the total sample size (n = 52).

RESULTS AND DISCUSSION

The baseline oral capabilities of the students before the deployment of the blended learning paradigm were notably low, characterized by long hesitations, systemic pronunciation errors of clinical terms, and sentence structure breakdowns. Following the 8-week blended intervention, a comprehensive upward shift in scores was observed across the board. The table below illustrates the collective descriptive advancements achieved by the 52 participants:

Table 2. The Collective Descriptive Advancements

Assessment Phase	Sample Size (N)	Minimum Score	Maximum Score	Mean Score (μ)	Std. Deviation (σ)
Pre-test	52	48.00	74.00	62.45	6.12
Post-test	52	68.00	92.00	78.12	5.48

The collective mean score expanded by *15.67 points*. This macro-level progression signifies that the blended learning delivery mode successfully shifted the class average from a low 'C' level (Marginal Pass) to a strong 'B+'/'A' territory (Proficient Competence). Given the skewed gender ratios in the class (40 females vs. 12 males), tracking sub-group reactions to technology-mediated learning is critical. The disaggregated metrics are presented below:

Table 3. The Disaggregated Metrics

Gender Cohort	Sample Size (n)	Pre-test Mean	Post-test Mean	Net Mean Gain
Female Students	40	63.20	78.45	15.25
Male Students	12	59.95	77.02	17.07

Oral Score Progress Comparison:

Female : [63.20] ==========> [78.45] (+15.25)

Male : [59.95] ==========> [77.02] (+17.07)

The gender-disaggregated breakdowns unveil two vital insights:

1. *Baseline Variations:* Female students entered the research cycle with a noticeably higher baseline score (63.20) compared to their male counterparts (59.95).
2. *Growth Velocities:* Male students generated a slightly higher net mean gain (17.07) than female students (15.25). This implies that asynchronous digital preparation spaces may offer male students a low-stakes environment to practice, mitigating

classroom gender-performance anxieties.

To ascertain that the observed progression of 15.67 mean points was caused by the blended instructional design rather than mere coincidence, a paired sample t-test was computed. The assumptions of normality were verified beforehand using the Shapiro-Wilk metric ($p > 0.05$). The inferential outcomes are detailed in the following table:

Table 4. The Inferential Outcomes

Paired Differences (Post-test - Pre-test)	**Value**
Mean Difference (bar{D})	15.673
Standard Deviation of Difference (s_d)	3.841
Paired Differences (Post-test - Pre-test)	**Value**
Standard Error of the Mean	0.532
95% Confidence Interval - Lower Bound	14.604
95% Confidence Interval - Upper Bound	16.742
Calculated t-value	**29.432**
Degrees of Freedom (df)	51
Two-Tailed Significance (p-value)	**< 0.001**

Because the calculated t-value (29.432) vastly exceeds the critical critical table value for df = 51 (approx 2.008) and the p-value is less than 0.001, the null hypothesis (H_0) is rejected conclusively. There is a statistically profound, non-random enhancement in English speaking skills among the Medical Record students following the deployment of blended learning. To break down where the students improved the most, the average progress across the 5 structural rubric criteria was evaluated. Each criterion had a maximum value of 20 points:

Criteria Progress Breakdown (Max 20 Points Per Area):

1. Medical Pronunciation : [11.20] ====> [15.40] (+4.20)
2. Fluency & Coherence : [12.10] ====> [15.10] (+3.00)
3. Grammar Accuracy : [12.80] ====> [14.90] (+2.10)
4. Vocabulary Range : [13.15] ====> [16.80] (+3.65)
5. Task Completion : [13.20] ====> [15.92] (+2.72)

The analytical diagnostic displays that *Medical Pronunciation & Intonation* registered the highest numeric leap (+4.20). This directly links back to the accessibility of video loops on the LMS, which allowed students to repeatedly review phonetic

breakdowns of complex terms (such as *Gastroenteritis*, *Myocardial Infarction*, or *Encephalopathy*) before performing live in class.

Discussion

The statistical success of the blended learning approach at Universitas Bhakti Hasta Mulia Madiun stems from both cognitive optimization and the mitigation of affective psychological barriers. In a traditional classroom setup, a student's processing time is highly constrained. However, by offloading the passive absorption of theoretical content to an asynchronous environment, the cognitive load during the physical face-to-face class is significantly streamlined. Students arrived at the practical session already equipped with the necessary lexicon and phonological schema. From an affective standpoint, language anxiety often paralyzes vocational students. The asynchronous video tasks served as a safe intermediate step. Instead of facing immediate judgment from 51 peers, students could delete, re-record, and refine their spoken output in the privacy of their homes before submitting it for review. This iterative self-correction loop accelerated habit formation and built systemic confidence.

With a classroom environment heavily dominated by female students (76.9%), the social dynamics of oral execution are highly nuanced. In traditional classrooms, male students in the minority may exhibit avoidant behavior to protect their social standing from perceived communication failures. The data revealed that male students achieved a net growth acceleration of +17.07. The blended format provided an equitable framework where male students utilized the digital platform to build baseline mechanics privately, which optimized their participation during the collaborative, in-person role plays. The study demonstrates that general English frameworks are insufficient for Medical Record programs. The integration of authentic documents, such as mock EHR interfaces and admission sheets, into the blended learning curriculum directly links language instruction with professional utility. When students recognize that mastering oral English directly correlates with their career competence as health information managers, their intrinsic motivation increases exponentially. Based on the questionnaire results regarding blended learning, it can be explained that the blended learning method has a positive impact on improving students' speaking skills and can increase students' motivation in speaking English, this can be proven based on the majority of respondents' answers are agreeing with each statement in the questionnaire. This is similar to research (Sareen, 2025) which states that blended learning methods can improve speaking skills and increase student motivation in learning speaking skills, this is explained in the point of student perception of blended learning methods. The blended learning method encourages students to learn at their own pace because students can use learning tools and materials that are tailored to their learning styles. This is different from research by (Cao, 2023) who used an interview instrument to find out students' perceptions of the blended learning method, the

results of the interview stated that the blended learning method can make students learn according to their respective portions.

CONCLUSION, LIMITATION AND SUGGESTION

This study provides clear empirical validation for the integration of a Blended Learning model within vocational health education, specifically for the Medical Record Program at Universitas Bhakti Hasta Mulia Madiun. The systematic analysis of 52 second-semester students demonstrated a significant increase in collective oral performance scores, rising from a pre-test baseline of 62.45 to a post-test proficiency level of 78.12 ($p < 0.001$).

The blended environment optimized physical classroom hours for communicative interaction, mitigated speech anxiety through asynchronous video submissions, and successfully accommodated the class's unique gender distribution. Based on these findings, the following actions are recommended: (i) *Institutional Curricular Policy:* The management of Universitas Bhakti Hasta Mulia Madiun should institutionalize the flipped blended structure for all vocational language modules, moving away from purely lecture-based methods; (ii) *LMS Infrastructure Expansion:* The institution should expand its digital capabilities by incorporating automated speech-recognition tools within the campus LMS to provide immediate phonological feedback; (iii) *Future Research Directions:* Subsequent research should expand the scope of this study by employing longitudinal designs that track the retention of oral skills through the students' clinical internships in hospitals.

REFERENCES

Abugohar, M. A., Al-Hnifat, M. A., Al-Smadi, O. A., Rashid, R. A., & Yunus, K. (2019). English language speaking skill issues in an EMP context: Causes and Solutions. e-ISSN: 2723-1623p-ISSN: 2723-1615

Ali, R. (2025). How challenging? barriers for teachers in institutional implementation of blended learning. Open Learning: The Journal of Open, Distance and e-Learning, 40(3), 324-341.

Alqahtani, A. S. (2020). *Flipping the ESP classroom: A blended learning approach to enhancing healthcare students' speaking competencies.* Journal of Language for Specific Purposes, 7(2), 115–130.

Cao, W. (2023). A meta-analysis of effects of blended learning on performance, attitude, achievement, and engagement across different countries. Frontiers in Psychology, 14, 1212056.

Falah, I. fajrul, & Chairuddin. (2022). Students’ attitudes toward blended learning

through Google Classroom in general English course. Journal of Educatiion Linguistis Litrature and Language Reaching, 1(5), 1–9.

Garrison, D. R., & Vaughan, N. D. (2008). *Blended Learning in Higher Education: Framework, Principles, and Guidelines.* John Wiley & Sons.

Graham, C. R., & Dziuban, C. (2008). Blended learning environments. Handbook of Research on Educational Communications and Technology, Third Edition, January 2007, 269–276. https://doi.org/10.4324/9780203880869-26

Kemenkes RI. (2022). *Standardisasi Digitalisasi Rekam Medis Elektronik Indonesia.* Kementerian Kesehatan Republik Indonesia.

Nation, I. S. P., & Newton, J. (2008). Routledge. https://doi.org/10.4324/9780203891704

Pratiwi, Z. F., & Ayu, M. (2020). the use of describing picture strategy to improve secondary students' speaking skill. Journal of English Language Teaching and Learning, 1(2), 38–43. https://doi.org/10.33365/jeltl.v1i2.603

Richards, J. C. (2015). *Communicative Language Teaching Today.* Cambridge University Press.

Sareen, S., & Mandal, S. (2025). Understanding blended learning at the intersection of policy discourse and academic discussions. Journal of Further and Higher Education, 49 (1), 72-87.