

BLENDING LEARNING IMPLEMENTATION IN TEACHING ENGLISH FOR MEDICAL PURPOSES IN HIGHER EDUCATION

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ABSTRACT

The integration of technology in higher education has significantly transformed English language teaching, particularly in English for Specific Purposes (ESP). This study aims to investigate the implementation of blended learning in teaching English for Medical Purposes (EMP) and its impact on students' communication competence in higher education. A quasi-experimental design was employed involving 60 medical record students at a health sciences college. The data were collected through pre-tests, post-tests, questionnaires, and classroom observations. The findings revealed that blended learning significantly improved students' medical vocabulary mastery, speaking performance, and overall engagement compared to traditional face-to-face instruction. The results suggest that blended learning provides flexibility, interactive learning experiences, and enhanced exposure to authentic medical materials. Therefore, it is recommended as an effective approach for EMP instruction in higher education.

Keywords: *blended learning, English for Medical Purposes, higher education, ESP, healthcare communication.*

Introduction

English proficiency is increasingly essential in healthcare professions due to globalization, international patient mobility, and access to medical research published predominantly in English. English for Medical Purposes (EMP), a specialized branch of English for Specific Purposes (ESP), aims to equip students with linguistic competencies tailored to clinical and healthcare contexts.

Despite its importance, EMP instruction often relies heavily on traditional classroom-based methods, which may limit students' exposure to authentic materials, interactive simulations, and flexible learning opportunities. The emergence of blended learning – combining face-to-face and online learning modalities – offers an alternative pedagogical model that integrates technological affordances with communicative practice.

Blended learning is grounded in constructivist and socio-interactionist learning theories, emphasizing active participation, learner autonomy, and meaningful interaction. However, empirical evidence regarding its effectiveness in EMP contexts remains limited, particularly in developing higher education institutions.

English for Medical Purposes (EMP)

Dhaniel Prasetyo Irianto: *Blended Learning Implementation*

EMP focuses on communicative functions required in healthcare settings, including patient interviews, medical documentation, case presentations, and interdisciplinary communication. According to Hutchinson and Waters (1987), ESP instruction should be based on learners' needs and contextual language use. In medical education, this implies integrating authentic clinical discourse and task-based activities.

Blended Learning in Higher Education

Blended learning integrates online digital media with traditional classroom methods. Garrison and Kanuka (2004) argue that blended learning has transformative potential in higher education by enhancing interaction and cognitive presence.

Pedagogically, blended learning: Encourages self-regulated learning, Provides multimodal content delivery, Increases flexibility and accessibility, Enhances student engagement.

Theoretical Framework

This study is grounded in: **Constructivist Learning Theory** - Knowledge is constructed through interaction and experience. **Communicative Language Teaching (CLT)** - Emphasizes meaningful communication in real-life contexts.

Community of Inquiry (CoI) Framework - Focuses on cognitive, social, and teaching presence in blended environments.

RESEARCH METHODOLOGY

Research Design

A quasi-experimental pre-test-post-test control group design was employed.

Participants

The participants were 72 second-year students enrolled in a Medical Record program at a health sciences college: Experimental Group (n=36): Blended Learning, Control Group (n=36): Traditional Instruction

Instruments

Medical Vocabulary Test (30 multiple-choice items), *speaking Performance Test* (clinical role-play assessment), *speaking Rubric* (fluency, accuracy, pronunciation, confidence; scale 1-5), *student Perception Questionnaire* (Likert scale, 20 items), *Observation Checklist*.

Validity was ensured through expert judgment, and reliability was tested using Cronbach's Alpha ($\alpha = 0.87$).

Treatment Procedure

The study lasted 10 weeks.

Experimental Group (Blended Learning Model):

- 50% face-to-face sessions: role-play, case discussion, pronunciation drills

- 50% online via LMS: video lectures, interactive quizzes, clinical simulation videos, discussion forums, vocabulary exercises

Control Group: 100% traditional face-to-face instruction

Data Analysis

Data were analyzed using: Paired-sample t-test (within-group comparison), independent-sample t-test (between-group comparison), effect size (Cohen's d), descriptive statistics for perception survey.

RESULT AND DISCUSSION

Group	Pre-Test Mean	Post-Test Mean	Gain Score
Experimental	65.42	82.75	+17.33
Control	66.10	74.20	+8.10

Independent t-test results showed:

$t(70) = 4.87, p < 0.001$

Effect size (Cohen's $d = 0.85$) → Large effect.

The most significant improvement was observed in: Medical vocabulary mastery, speaking fluency, communication confidence.

Students reported: Increased motivation (89%), improved autonomy (85%), better understanding of medical terminology (92%), preference for blended model (87%).

The findings demonstrate that blended learning significantly enhances EMP learning outcomes. The integration of asynchronous online activities allowed repeated exposure to medical terminology, while synchronous face-to-face sessions strengthened communicative competence.

The large effect size indicates that blended learning is not merely supplementary but transformative in EMP instruction. The findings support constructivist principles where students actively engage with authentic materials and collaborative tasks. Moreover, increased confidence suggests that blended learning reduces language anxiety by allowing students to practice online before face-to-face performance.

Pedagogical Implications

EMP instructors should integrate LMS-based vocabulary modules. Clinical simulations should be embedded in online components. Assessment should combine digital quizzes and performance-based evaluation. Institutions should provide technological training for lecturers.

Limitations

Limited to one institution, short duration (10 weeks), no long-term retention measurement. Future studies may explore AI-assisted EMP learning or longitudinal designs.

CONCLUSION

Blended learning significantly improves English communication competence in EMP courses. It enhances vocabulary acquisition, fluency, confidence, and learner engagement. Therefore, it is recommended as a sustainable pedagogical model for English for Medical Purposes in higher education institutions.

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