

ENHANCING NURSING STUDENTS' ENGLISH-SPEAKING SKILLS THROUGH MULTIMEDIA: AN ACTION RESEARCH AT HAI DUONG MEDICAL TECHNICAL UNIVERSITY

Vu Thi Hong Ly*, Pham Thi Xuyen

Hai Duong Medical Technical University

ARTICLE INFO	ABSTRACT
Received: 12/11/2024	This study evaluates the effectiveness of using multimedia tools to improve the English-speaking skills of nursing students at Hai Duong Medical Technical University. The research aims to determine the extent to which multimedia tools enhance students' English speaking skills. Thirty pre-intermediate nursing students participated in two cycles of action research. The study was conducted at Hai Duong Medical Technical University in the academic years of 2016-2017. Multimedia tools, such as videos, audio recordings, and animations, were incorporated into traditional English speaking lessons. Data was collected through a combination of pre- and post-tests, classroom observations, field notes, and student interviews to gather both quantitative and qualitative data. Quantitative findings indicated a significant improvement in the students' speaking skills, particularly in pronunciation, fluency, grammar accuracy, and vocabulary use, with an average increase of 15% in overall speaking scores. Qualitative data highlighted that students found the multimedia-enhanced lessons to be highly interactive, engaging, and closely aligned with their medical professional goals. The study concludes that integrating multimedia tools into English language teaching can be an effective strategy for improving speaking skills, especially in specialized fields like medical training.
Revised: 27/3/2025	
Published: 28/3/2025	
KEYWORDS	
Multimedia tools	
English speaking skills	
Quantitative and qualitative data	
Nursing students	
Medical scenarios	

SỬ DỤNG CÔNG CỤ ĐA PHƯƠNG TIỆN NHẪM NÂNG CAO KỸ NĂNG NÓI TIẾNG ANH CHO SINH VIÊN ĐIỀU DƯỠNG: NGHIÊN CỨU HÀNH ĐỘNG TẠI TRƯỜNG ĐẠI HỌC KỸ THUẬT Y TẾ HẢI DƯƠNG

Vũ Thị Hồng Lý*, Phạm Thị Xuyên

Trường Đại học Kỹ thuật Y tế Hải Dương

THÔNG TIN BÀI BÁO	TÓM TẮT
Ngày nhận bài: 12/11/2024	Nghiên cứu này đánh giá hiệu quả của việc sử dụng các công cụ đa phương tiện trong việc cải thiện kỹ năng nói tiếng Anh của sinh viên điều dưỡng tại Trường Đại học Kỹ thuật Y tế Hải Dương. Mục tiêu của nghiên cứu là xác định mức độ mà các công cụ đa phương tiện có thể nâng cao kỹ năng nói tiếng Anh của sinh viên. Ba mươi sinh viên điều dưỡng trình độ tiền trung cấp đã tham gia vào hai chu kỳ nghiên cứu hành động. Nghiên cứu được thực hiện tại Trường Đại học Kỹ thuật Y tế Hải Dương trong năm học 2016-2017. Các công cụ đa phương tiện, chẳng hạn như video, bản ghi âm và hoạt hình, đã được tích hợp vào các bài học nói tiếng Anh truyền thống. Dữ liệu được thu thập thông qua sự kết hợp giữa các bài kiểm tra trước và sau, quan sát lớp học, ghi chép thực địa và phỏng vấn sinh viên để thu thập cả dữ liệu định lượng và định tính. Kết quả định lượng cho thấy sự cải thiện đáng kể về kỹ năng nói của sinh viên, đặc biệt là ở các khía cạnh phát âm, lưu loát, độ chính xác ngữ pháp và sử dụng từ vựng, với mức tăng trung bình 15% trong tổng điểm nói. Dữ liệu định tính nhấn mạnh rằng sinh viên cảm thấy các bài học có sử dụng đa phương tiện rất tương tác, thú vị và phù hợp chặt chẽ với mục tiêu nghề nghiệp y tế của họ. Nghiên cứu kết luận rằng việc tích hợp các công cụ đa phương tiện vào giảng dạy tiếng Anh là một chiến lược hiệu quả để cải thiện kỹ năng nói, đặc biệt trong các lĩnh vực chuyên biệt như đào tạo y tế.
Ngày hoàn thiện: 27/3/2025	
Ngày đăng: 28/3/2025	
TỪ KHÓA	
Phương tiện hỗ trợ giảng dạy đa phương tiện	
Kỹ năng nói tiếng Anh	
Dữ liệu định lượng và định tính	
Sinh viên điều dưỡng	
Môi trường đào tạo y khoa	

DOI: <https://doi.org/10.34238/tnu-jst.11539>

* Corresponding author. Email: ly.vuthong@gmail.com

1. Introduction

The need for proficient English communication skills has surged, particularly in the healthcare field, where effective communication is essential for patient care and professional collaboration. English proficiency is critical for healthcare professionals to engage in international medical exchanges, patient consultations, and conferences [1]. However, in Vietnam, many medical students struggle to develop strong English-speaking skills despite years of formal education. Traditional English instruction at institutions such as Hai Duong Medical Technical University (HMTU) has often emphasized grammar and vocabulary over communicative competence, leaving students with theoretical knowledge but limited practical speaking abilities [2].

Multimedia teaching aids, such as videos, audio clips, and interactive animations, have increasingly been recognized as valuable tools for enhancing language learning. Recent studies show that multimedia fosters an engaging, interactive environment that improves language retention, fluency, and student motivation [3], [4]. In healthcare education, integrating multimedia resources enhances language proficiency and provides context-rich scenarios, where students can practice speaking skills relevant to their future medical careers [4]. Furthermore, mobile learning platforms, such as AFORN, have proven effective in significantly improving English-speaking skills among nursing students by offering flexible and accessible practice opportunities [5]. Additionally, research has shown that incorporating communicative teaching techniques, such as multimedia-enhanced simulations, can better equip healthcare professionals to handle real-life medical communication [6].

This action research explores how multimedia teaching aids can improve English as a Foreign Language (EFL) speaking skills among nursing students at HMTU. It investigates how multimedia tools can help students overcome challenges in fluency, pronunciation, grammar accuracy and vocabulary use. The research aims to determine the extent to which multimedia tools enhance students' English speaking skills. In the healthcare field, where precise and confident communication is essential, the development of these skills is particularly valuable [7]. This research also demonstrates that multimedia-enhanced lessons provide a holistic learning experience, addressing essential linguistic competencies for nursing students. This approach builds confidence and prepares students for professional medical interactions, where clear communication is crucial [8].

2. Methodology

2.1. Research design

The action research model used in this study is characterized by its cyclical process, which involves continuous steps of planning, action, observation, and reflection. Action research allows practitioners to systematically investigate their own teaching practices and make necessary adjustments in real-time. By continuously reflecting on their actions, lecturers can identify solutions to classroom challenges and improve instructional strategies, thereby enhancing student outcomes. This method is particularly effective in educational settings, as it fosters both personal and collective change. On a personal level, the teacher gains deeper insights into their pedagogical approaches, while on a collective level, improvements are shared with the larger community of educators to foster collaborative learning and development [9]. Two action research cycles were implemented in this study to assess the impact of multimedia on students' speaking skills. The cyclical process enabled the researcher to partly improve the teaching approach based on student feedback and performance outcomes after each cycle [10]. This adaptive method ensured that the intervention was tailored to meet the specific needs of the students in a dynamic learning environment.

2.2. Participants and setting

The participants of the study were 30 nursing students enrolled in a compulsory English-speaking course at HMTU. These students had varied levels of English proficiency, with most at the pre-intermediate level. The participants were selected because of their need to improve speaking skills, particularly in medical communication contexts. The course aimed to prepare them for professional interactions in English, such as patient consultations, presentations at medical conferences, and discussions with international colleagues.

The classroom environment provided a traditional lecture setup, but multimedia tools such as projectors and speakers were available. These tools were used to integrate multimedia content, such as medical scenario videos, dialogues, and pronunciation guides, into daily lessons.

2.3. Research procedure

A four-stage action research model consisting of planning, action, observation, and reflection which is based on the foundational work of Kemmis and McTaggart, referenced in [11] was applied in this study. The stages are illustrated in Figure 1.

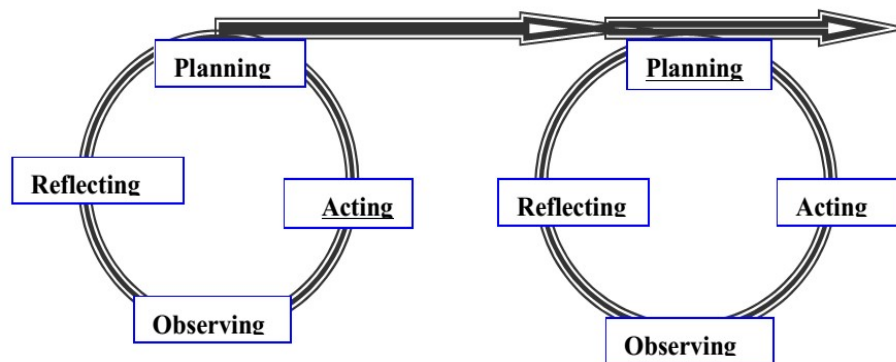


Figure 1. Four-stage action research model

This study retains the core elements of the model but includes specific adjustments to better suit the research objectives. This cyclical approach allows for ongoing problem-solving and iterative refinements to teaching methods, based on the outcomes observed at each stage.

The action research consisted of two cycles, each following the stages of planning, action, observation, and reflection. The specific details of each cycle are outlined below:

2.3.1. Cycle 1: Initial Implementation: Conducted over four weeks.

Planning: The researcher collaborated with an English teacher to develop lesson plans incorporating multimedia tools. These plans focused on key competencies, including pronunciation, fluency, and medical vocabulary. Videos and audio recordings depicting medical scenarios were selected to provide authentic and relevant language practice. A pre-test was administered to assess the students' baseline speaking skills.

Action: Two lessons were delivered per week, each lasting 90 minutes. Activities included:
Vocabulary practice: Matching English terms with Vietnamese equivalents and pronunciation drills.
Video analysis: Students watched medical scenario videos to identify language functions and expressions.

Role-play: Students acted out dialogues based on the videos, practicing real-life medical communication.

Observation: Data were collected through field notes, observation checklists, and students' interviews. The researcher monitored student engagement, participation, and speaking proficiency.

Reflection: At the end of Cycle 1, the researcher analyzed the data to identify strengths and areas for improvement. A post-test was conducted to evaluate progress in speaking skills. It was observed that students struggled with pronunciation and lacked confidence in spontaneous speaking. Adjustments were planned for Cycle 2 to address these challenges.

2.3.2. Cycle 2: Refinement and Expansion: Conducted over other four weeks.

Planning: Based on Cycle 1 reflections, lesson plans were revised to include explicit pronunciation feedback and more opportunities for spontaneous speaking. Additional multimedia resources, such as interactive animations, were introduced. Another pre-test was administered to assess the adjusted baseline for Cycle 2.

Action: Two lessons per week were again conducted. Activities included:

Pronunciation workshops: Focused on challenging medical terms, with students receiving immediate feedback.

Interactive simulations: Students engaged in unscripted role-plays using situation cards to simulate patient consultations.

Group discussions: Facilitated peer learning and increased speaking confidence.

Observation: The researcher and collaborating teacher used similar observation methods as in Cycle 1, with added emphasis on tracking progress in spontaneous speaking and confidence levels.

Reflection: Post-Cycle 2, the data showed significant improvements in students' speaking skills, particularly in pronunciation and fluency. Another post-test was conducted to measure the final improvements. Students also reported increased confidence and enjoyment in their learning experience.

2.4. Data collection and analysis

Quantitative data were gathered through pre- and post-tests, assessing pronunciation, fluency, grammar, and vocabulary. A standardized rubric adapted from Brown [12] was used to evaluate performance, and improvements were analyzed statistically. Qualitative data were collected via classroom observations, student interviews, and field notes. Thematic analysis was employed to identify patterns in student engagement, confidence, and perceived effectiveness of multimedia tools.

The iterative nature of the two cycles ensured continuous refinement of teaching strategies, ultimately contributing to the study's success in enhancing nursing students' English-speaking skills.

3. Results and Discussion

This section presents the findings of the study in two parts: quantitative results from the pre-test and post-test, and qualitative results from classroom observations, student interviews, and field notes. The findings demonstrate the positive impact of multimedia teaching aids on English-speaking skills in the context of medical training.

3.1. Improvement in speaking skills

The pre-test and post-test scores revealed notable improvements across all areas of speaking proficiency: pronunciation, fluency, vocabulary use, and grammatical accuracy. Table 1 shows the mean score improvements for each area of speaking and overall improvement.

Table 1. Improvement in speaking skills based on pre-test and post-test mean scores

Indicators	Pre-test mean score	Post-test mean score	Improvement
Pronunciation	3.5	4.0	14.3%
Fluency	3.2	3.7	15.6%
Vocabulary	3.8	4.4	15.8%
Grammar	3.9	4.4	12.8%
Overall	3.6	4.1	15.0%

The greatest improvement was observed in vocabulary (15.8%), followed closely by fluency (15.6%). This is likely due to repeated exposure to video dialogues and pronunciation guides provided during the lessons. Videos featuring medical scenarios allowed students to hear and replicate the correct pronunciation of complex medical terms. Fluency improved as students engaged in role-play activities that required them to communicate in real-time, enhancing their ability to speak spontaneously and confidently [13], [14].

The substantial progress in pronunciation (14.3%) and grammatical accuracy (12.8%) can be attributed to the multifaceted nature of the multimedia resources employed. These tools provided students with contextual learning opportunities, allowing them to internalize new lexical items and grammatical structures within relevant medical contexts. The interactive nature of the multimedia aids facilitated active engagement with the language, promoting retention and practical application of newly acquired linguistic skills [15], [16].

A standardized rubric adapted from Brown [12] was used to measure speaking proficiency. The rubric was adapted to address the specific context of the study, particularly vocabulary use in medical terminology. Speaking tests were evaluated by two raters using the rubric. The inter-rater reliability was calculated to ensure consistency in scoring.

3.2. Qualitative results

Thematic analysis of the qualitative data, from observations, field notes, and student interviews, revealed several key findings related to student perceptions of the multimedia-enhanced instruction. First, multimedia tools made the lessons more engaging and interactive. Students appreciated the use of videos and audio clips as these tools provided them with real-world examples of spoken English in medical settings [16]. Second, multimedia tools significantly reduced students' fear of making mistakes. Students felt more confident practicing English in role-plays after watching video demonstrations of doctor-patient dialogues. The reduction in anxiety allowed them to participate more actively in speaking activities, fostering a supportive learning environment [17], [18]. Finally, the multimedia approach helped students connect theoretical knowledge of medical vocabulary with practical usage. Students mentioned in the interviews that multimedia tools helped them retain new vocabulary more effectively, as they could see the words being used in context [19].

3.3. Discussion

This study's findings demonstrate a strong correlation between the quantitative and qualitative data, revealing the impact of multimedia teaching aids on English speaking skills in medical contexts. The analysis shows several points of consistency and a few areas of potential inconsistency. Quantitative results indicated significant improvements in students' pronunciation and fluency scores, which aligned with qualitative feedback from interviews where students reported increased confidence in their speaking abilities after exposure to video dialogues and pronunciation guides. Both data sets suggest that repeated exposure to authentic medical English through multimedia aids enhances pronunciation accuracy and speaking fluency. Furthermore, quantitative data revealed increased participation in speaking activities, corroborating qualitative feedback from field notes describing multimedia-enhanced lessons as more engaging and interactive. This consistency implies that multimedia aids effectively boost student motivation and active participation in language learning. While not directly measured in quantitative scores, qualitative data from observation checklists strongly indicated a reduction in students' fear of making mistakes, correlating with improved fluency scores and suggesting that a supportive learning environment contributes to better speaking performance.

However, some potential inconsistencies were noted. Despite quantitative improvements across all areas, including vocabulary and grammar, qualitative feedback focused primarily on pronunciation and fluency, possibly indicating that students were less aware of their progress in

vocabulary and grammar. Additionally, while quantitative data provided a snapshot of immediate improvement post-intervention, the qualitative data did not address long-term retention of these skills, highlighting an area for future research.

Consistent with earlier studies [3], [4], our research found that multimedia tools enhanced student engagement and created a more interactive learning environment. However, our study extends these findings by specifically demonstrating their effectiveness in a medical English context. The significant improvements in pronunciation (14.3%) and fluency (15.6%) align with previous research on multimedia use in language learning [15], [16], but our study uniquely shows how these improvements translate to medical communication skills.

A novel contribution of this research is the observed reduction in speaking anxiety when using multimedia tools, particularly in medical scenarios. This finding builds upon previous work on affective factors in language learning [8], but applies it specifically to the high-stakes context of medical communication. The improvement in vocabulary acquisition (15.8%) through multimedia-enhanced lessons underscores the value of contextual learning in specialized fields, extending beyond general language learning contexts studied in previous research [19].

Furthermore, our study provides new insights into the application of multimedia tools in English for specific purposes (ESP) contexts, particularly in medical education. The use of authentic medical scenarios in videos not only improved language skills but also familiarized students with real-world medical communication, a crucial aspect not extensively explored in previous studies on multimedia in language learning.

3.4. Pedagogical implications

The findings of this study have several important pedagogical implications for English language teaching, particularly in medical education contexts. The significant improvements in pronunciation, fluency, and overall engagement suggest that multimedia tools should be systematically integrated into EFL curricula, especially for specialized fields like medical education. The effectiveness of medical scenario videos highlights the importance of using authentic materials in language teaching. Educators should consider incorporating a variety of authentic multimedia resources to enhance the learning experience and prepare students for real-world communication in their field. The reduction in speaking anxiety observed when using multimedia tools emphasizes the need for creating a supportive classroom environment. Teachers should leverage multimedia to encourage risk-taking and active participation in speaking activities.

4. Conclusion and recommendations

4.1. Conclusion

This action research demonstrates the positive impact of multimedia teaching aids on improving EFL speaking skills among nursing students at HMTU, directly addressing our research question: "To what extent does the use of multimedia tools enhance students' English speaking skill?" The integration of multimedia into traditional speaking lessons led to a significant overall improvement of 15% in speaking skills, with individual improvements in pronunciation (14.3%), fluency (15.6%), vocabulary use (15.8%), and grammatical accuracy (12.8%).

Moreover, qualitative data revealed that multimedia tools enhanced student engagement, reduced anxiety, and created a more interactive and enjoyable learning environment. The consistency between quantitative improvements and qualitative feedback reinforces the effectiveness of multimedia tools in language learning, particularly in specialized contexts like medical English.

However, the study also revealed areas for further investigation, such as the long-term retention of acquired skills and students' awareness of progress in vocabulary and grammar. These findings suggest that multimedia can be a valuable addition to EFL curricula, particularly

in specialized fields where students need to acquire both linguistic and professional communication skills.

4.2. Recommendations

Based on the research findings, it is recommended that multimedia tools be systematically integrated into English language curricula, particularly in medical education. Educators should prioritize the use of authentic materials, such as medical scenario videos, to enhance the relevance and practicality of language instruction. A supportive classroom environment that encourages active participation and risk-taking is essential for fostering confidence and fluency development. Multimedia can also be effectively used to create context-rich activities that simulate real-world medical communication scenarios, thereby promoting vocabulary acquisition and grammatical accuracy.

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