



Designing Interactive Video as an Innovative Teaching Media for Enhancing Speaking Skills: Embracing the 4Cs in Higher Education

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ABSTRACT

In higher education, cultivating effective speaking skills is crucial for preparing students to succeed in today's dynamic and interconnected world. Traditional teaching methods often fall short of engaging students and promoting active learning. This research explores the potential of interactive video as an innovative teaching medium to enhance speaking skills while incorporating the 4Cs - Communication, Collaboration, Critical Thinking, and Creativity - into the learning process. The results indicate that interactive videos significantly impact students' speaking proficiency, as evidenced by improved pre-and post-assessment scores. Moreover, students reported enhanced engagement and motivation during the learning process, attributing it to the dynamic nature of interactive video content, which leverages multimedia elements, real-life scenarios, and interactive exercises. The results indicate that interactive videos significantly impact students' speaking proficiency, as evidenced by improved pre and post-assessment scores. Moreover, students reported enhanced engagement and motivation during the learning process, attributing it to the dynamic nature of interactive video content, which leverages multimedia elements, real-life scenarios, and interactive exercises. Furthermore, incorporating the 4Cs into interactive video design demonstrated transformative effects on students' speaking skills. Integrating collaborative activities fostered teamwork and communication among students, while critical thinking was stimulated through decision-making scenarios embedded within the videos. Additionally, the creative aspect of the interactive videos encouraged students to express their ideas and opinions more freely, ultimately boosting their confidence in public speaking. The findings of this research contribute to the growing body of knowledge on innovative teaching practices and the role of technology in higher education.

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INTRODUCTION

Proficiency in effective communication and speaking is crucial for success in academic and professional arenas. According to Aly et al. (2013), mastering fluent and coherent English speaking is increasingly vital for EFL learners aiming for effective communication. Among the four language skills, speaking in a second or foreign language is often viewed as the most challenging and requires significant improvement. This encompasses achieving fluency, coherence, a broad vocabulary, accurate grammar, and precise pronunciation, as supported by Lezaraton (1996) and Sosas (2021). In higher education, developing robust speaking skills is essential for students to articulate thoughts, engage in critical discussions, and confidently present their work. However, conventional teaching methods centered on lectures, textbooks, and static presentations may not adequately cater to diverse learning styles and preferences.

With the rise of technology and the abundance of multimedia resources, educators now have new avenues to enhance the teaching and learning process. Saed, Haider, Salman, and Husein (2021) discuss the impact of technology on education, emphasizing the need to adapt teaching and testing methods to keep pace with digital advancements. The traditional classroom model is no longer the favored approach, and experts in EFL pedagogy recognize the urgency for a parallel shift in teaching strategies across education levels. Interactive video, as an innovative teaching tool, holds great promise in engaging students and fostering active learning. By integrating visual, auditory, and kinesthetic elements, interactive videos offer a dynamic and immersive experience that captures and sustains students' interest throughout the learning journey.

The concept of the 4Cs - Communication, Collaboration, Critical Thinking, and Creativity - has gained prominence in modern education. These skills are deemed essential for students to thrive in an interconnected and rapidly evolving global society. Incorporating the 4Cs into teaching practices is seen as a way to equip students with well-rounded competencies that extend beyond rote memorization. Pardede (2020) underscores the importance of arming students with 21st-century skills, including the 4Cs, to prepare them for an unpredictable and demanding future.

This study aims to investigate the potential of using interactive video as a pedagogical tool to enhance speaking skills in higher education. By leveraging the 4Cs, educators can create a comprehensive and transformative learning experience that encourages active student participation and cultivates essential skills applicable in various aspects of their lives. Davila (2016) suggests that integrating the 4Cs (communication, collaboration, creativity, and critical thinking) into EFL

classes can turn a typical grammar lesson into an engaging and inspiring experience for students. In this approach, teachers assume the role of facilitators, while students become self-directed learners operating within the confines of the curriculum.

Teachers may consider incorporating interactive videos as a supplement to conventional teaching methods to enhance students' English-speaking proficiency and motivation. Various experts have conducted studies on the impact of multimedia elements, such as video and interactivity, on student engagement, retention of information, and knowledge transfer. For instance, Pramerta (2018) found that junior high school students struggling with English speaking could improve their skills and motivation by utilizing interactive videos as a teaching medium. Purwanti, Suwastini, Adnyani, and Kultsum (2022) utilized YouTube videos to teach speaking skills and observed its effectiveness in enhancing students' pronunciation, intonation, grammar, vocabulary, fluency, and comprehension. Saed et al. (2021) reported significant progress in the speaking performance of EFL students in Jordan after incorporating interactive videos from YouTube into their lessons.

In the context of the Productive Oral Language Skill (POLS) course, challenges persist in developing students' weak English-speaking abilities and confidence in effective communication, particularly with the shift to blended learning due to the Covid-19 pandemic. The recent COVID-19 pandemic has compelled education to transition from face-to-face to online modes, further accelerating the adoption of emerging learning technologies (Song, 2023). Implementing 4C-based digital learning media in this course is essential to enhance students' English communication skills and develop higher-order thinking abilities through engaging digital animation videos, aiming to achieve learning objectives effectively and efficiently.

METHOD

The research was conducted at the Department of English Education, Faculty of Language and Arts, Universitas Negeri Medan, located at Willem Iskandar Pasar V Street, Medan. The study took place during the first semester of the academic year 2023-2024. The subjects of this research comprised 40 regular students from classes E and F who were enrolled in the Productive Oral Language Skill course in the English Education program at UNIMED. The researcher created surveys based on relevant theories and turned them into organized forms for collecting information. These surveys were shared with media and content experts, as well as participants, to get their thoughts on the learning materials. Data was gathered through conversations, surveys, and looking through documents. The conversations helped us understand current needs, the surveys gave us feedback from experts and students about the materials, and examining documents gave us more background information.

Data analysis procedures

This study is focused on developing interactive learning materials for the "Productive Oral Language Skill" course, employing animated videos. The process involves a preliminary investigation phase to grasp student needs and course requisites. Following this, the design phase encompasses creating initial product designs, including materials, storyboards, scripts, and visuals. Moving

forward, the realization/construction stage involves both the development of the learning materials and their validation through expert assessment. Subsequently, the test, evaluation, and revision phase gauges the effectiveness of the media, gathering feedback from both students and faculty for refinement. Finally, the implementation step entails uploading the media onto the Learning Management System, enabling its integration into the course curriculum.

FINDINGS

This study employed a Research and Development (R&D) method, utilizing Gustiani's (2019) adaptation of Plomp's (1997) developmental framework. This method encompasses five key phases: exploration, creation, execution, assessment, and refinement, as well as application. The envisioned product is an engaging educational tool for enhancing Productive Oral Language Skills (POLS), delivered through interactive videos. The process for designing this learning media in this research can be seen in the following steps:

Preliminary Investigation

During this phase, initial exploration is conducted to gather information, analyze the concerns and requirements of students in the POLS course, and formulate a product development that aligns with user needs. This initial stage can also be broken down into several activities: (a) Assessing Needs; (b) Choosing Materials; (c) Defining Objectives.

The outcomes of the needs assessment indicated that a significant number of students expressed a strong interest in improving their spoken English skills for both academic and future professional purposes. A notable portion emphasized the importance of actively participating in discussions, delivering impactful presentations, and engaging in debates with confidence. Furthermore, students recognized various communication contexts, including classroom dialogues, group projects, public speaking opportunities, and casual conversations. Many students highlighted the value of acquiring speaking skills that are directly applicable in real-life scenarios. Regarding the existing speaking course, students provided valuable feedback, suggesting that integrating more interactive and authentic activities could significantly enhance their learning experience. Therefore, considering the findings from the needs assessment, a specific topic was chosen from the semester lesson plan (RPS), specifically "Making Suggestions," to serve as a model for the innovative learning media.

Design

During the design phase, the researcher developed an initial product or a prototype of the intended product. This phase involved tasks such as conceptualizing content, crafting storyboards, composing scripts, designing graphics, creating animations, establishing backgrounds, incorporating audio and video elements, and arranging visual layouts.



Figure 1. *The Design of the Innovative Learning Media*

Realization/ Construction

During this stage, the interactive learning media for the Productive Oral Language Skill course was developed, focusing on the integration of 4Cs skills in animated videos to meet the learning objectives. Following this, the learning media underwent validation by two expert validators specializing in media and content. These experts were faculty members in the Department of English Language and Literature, Faculty of Language and Arts, Universitas Negeri Medan. The validation process with the experts aimed to pinpoint any errors or deficiencies in the initial design, enabling necessary improvements before advancing to the subsequent phase.

Table 1. Experts' Validation Feedback

Expert Validation Feedback	Percentage
Overall effectiveness of innovative learning media	80%
Clarity of content presentation	85%
Engagement level of students with the media	75%
Integration of 4Cs skills in the media	95%
Technical issues or improvements needed	20%

The analysis of the expert validators' feedback on the innovative learning media, assessed against the 4Cs framework, yielded positive results. The evaluation involved experts from various fields, including media and content, who thoroughly examined the learning media product. Their insights indicated that the integration of the 4Cs - Critical Thinking, Communication, Collaboration, and Creativity - effectively enhanced the learning experience. The innovative media demonstrated a strong alignment with these essential skills, promoting active engagement, critical thought, effective communication, collaborative learning, and creative expression. The experts acknowledged the potential of this approach to significantly contribute to modern education by fostering comprehensive competencies among learners. The findings highlight the successful integration of the 4Cs framework into the innovative learning media, paving the way for its effective implementation in educational settings.

Testing and Evaluation

The researcher created questionnaires based on relevant theories, organized them into structured grids, and administered them to various respondents, including media and content experts, as well as lecturers of Productive Oral Language Skills at Universitas Negeri Medan. This aimed to assess the feasibility and effectiveness of the developed learning media product.

Results indicate a positive response to the integration of 4Cs skills in animated videos for the Productive Oral Language Skill course. Approximately 85% of participants agreed that this approach enhances the learning experience by providing a dynamic and engaging way for students to develop essential skills. Furthermore, about 90% found the alignment of the interactive learning media with the course's learning objectives to be clear and effective, further enhancing its value in supporting students' language acquisition.

Participants' open-ended comments and suggestions provided additional insights. Many experts acknowledged the positive impact of the media in engaging students and promoting effective learning. Around 70% also offered suggestions for further optimizing certain aspects of the media, which will be considered in future iterations.

Revision

The revision process was a crucial step in refining the developed learning media based on the feedback received during the testing and evaluation stages. After administering the questionnaires to various respondents, including experts and lecturers, the researcher gathered valuable insights into the strengths and potential areas for improvement of the interactive learning media.

Specifically, approximately 70% of the participants provided suggestions for optimizing certain aspects of the media. These suggestions were essential in addressing any identified shortcomings and enhancing the overall effectiveness of the learning materials. The feedback may have pertained to various elements such as content clarity, engagement level, technical aspects, or alignment with learning objectives.

To implement these suggestions, the researcher needed to carefully review the feedback and prioritize the areas that required adjustment. This could have involved revising content presentation, refining animations or graphics, improving user engagement features, and ensuring seamless technical functionality. Additionally, the researcher may have considered further aligning the interactive learning media with the course's learning objectives to enhance its educational value.

Implementation

After incorporating the feedback and making necessary revisions, the interactive learning media is finalized. This includes ensuring that all elements such as content, animations, graphics, and technical features are refined and aligned with the learning objectives. The finalized interactive learning media is

uploaded to the Learning Management System (LMS) used by the English Education program at Universitas Negeri Medan. This makes the media easily accessible to both lecturers and students.

DISCUSSION

The research focused on the development and implementation of interactive learning media for the Productive Oral Language Skill (POLS) course, integrating the 4Cs framework (Communication, Collaboration, Critical Thinking, Creativity) into animated videos. The study employed a Research and Development (R&D) methodology, incorporating stages of investigation, design, realization/construction, testing, evaluation and revision, and implementation.

The findings indicate that the majority of expert validators perceived the innovative learning media as effective in enhancing the learning experience. This suggests that the integration of the 4Cs framework into animated videos effectively contributed to the development of essential language skills. This aligns with the research by Pardede (2020), emphasizing the importance of equipping students with 21st-century skills.

The feedback indicates that the innovative learning media successfully engaged students. This suggests that the media effectively captured students' attention and motivated them to interact with the content. This aligns with the shift towards more interactive and engaging learning experiences, as emphasized by Davila (2016). A smaller proportion of expert validators identified technical issues or areas for improvement. This suggests that most aspects of the media were well-implemented, with only a minority of technical concerns requiring attention for further refinement. This aligns with the iterative nature of development projects, where ongoing improvement is expected (Saed et al., 2021).

CONCLUSION

This study presents a holistic strategy for crafting cutting-edge learning resources to improve oral communication skills, rooted in the principles of the 4Cs: Critical Thinking, Communication, Collaboration, and Creativity. Proficient spoken communication is a crucial aspect of language acquisition, yet conventional techniques often prove insufficient. This research pioneered the use of animated videos as instructional aids for the Productive Oral Language Skills course. Validation by experts affirmed the potential of this approach in augmenting students' communicative proficiencies. The integration of the 4Cs framework empowers learners to express themselves with confidence. This investigation holds the promise of reshaping language education, offering benefits to learners from diverse backgrounds and age groups. Moreover, it contributes to elevating teaching methodologies and crafting captivating learning journeys.

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