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DOI : 10.32734/lwsa.v7i2.2064  
Electronic ISSN : 2654-7066  
Print ISSN : 2654-7058

*Volume 7 Issue 2 – 2022 TALENTA Conference Series: Local Wisdom, Social, and Arts (LWSA)*



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# Designing Innovative Learning Media for Speaking Skill based on the 4Cs (Critical Thinking, Communication, Collaboration, and Creativity)

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## Abstract

This research paper proposes a design framework for developing innovative learning media aimed at enhancing speaking skills, drawing on the 4Cs approach: Critical Thinking, Communication, Collaboration, and Creativity. In language education, the ability to express oneself fluently and effectively in spoken communication is of utmost importance. Traditional language learning methods often lack engagement and fail to fully address the needs of learners in a dynamic and interconnected world. Interviews, questionnaires, and literature reviews were used to collect data in this learning media development research. This study involved some procedures, namely data collection, need analysis, course material design, expert validation and evaluation of new course material, and course material revision and final product revision. The subject of this study was 30 students of the English Education Study Program (F and G class), Universitas Negeri Medan. The data for need analysis were taken from interviews with lecturers and students. The output of research is the animation videos as the learning media for the Productive Oral Language Skills subject. The expert validation feedback underscores the successful development of the innovative learning media for the Productive Oral Language Skill course. The 4Cs approach serves as a solid foundation to empower language learners with the necessary competencies to communicate confidently and effectively. The outcomes of this research hold promising potential to revolutionize language education and contribute to more successful language acquisition outcomes for learners of all ages and backgrounds.

Keywords: Innovative Learning; Teaching Media; Speaking; 4C; 21st Century Learning

## Abstrak

Penelitian ini bertujuan untuk mengembangkan media pembelajaran inovatif guna meningkatkan keterampilan berbicara dengan merujuk pada pendekatan 4Cs: Critical Thinking, Communication, Collaboration, dan Creativity. Dalam konteks pendidikan bahasa, kemampuan untuk menggunakan ungkapan dalam komunikasi lisan secara lancar dan efektif sangatlah penting. Metode pembelajaran bahasa yang konvensional seringkali kurang menarik dan tidak sepenuhnya mengakomodasi kebutuhan pembelajar di dunia yang dinamis dan saling terhubung. Penelitian ini menggunakan wawancara, kuesioner, dan tinjauan literatur sebagai metode pengumpulan data untuk pengembangan media pembelajaran. Tahapan studi melibatkan beberapa proses, yaitu pengumpulan data, analisis kebutuhan, desain materi kursus, validasi ahli, evaluasi materi kursus baru, serta revisi materi kursus dan produk akhir. Subjek penelitian ini adalah 30 mahasiswa Program Studi Pendidikan Bahasa Inggris (kelas F dan G) di Universitas Negeri Medan. Data untuk analisis kebutuhan diperoleh melalui wawancara dengan dosen dan mahasiswa. Hasil penelitian ini berupa video animasi sebagai media pembelajaran untuk mata kuliah Productive Oral Language Skills. Umpan balik validasi ahli menunjukkan perkembangan yang berhasil dari media pembelajaran inovatif untuk mata kuliah Productive Oral Language Skills. Pendekatan 4Cs menjadi dasar yang solid untuk memberdayakan pembelajar bahasa dengan kompetensi yang diperlukan agar dapat berkomunikasi dengan percaya diri dan efektif. Hasil penelitian ini memiliki potensi yang menjanjikan untuk merevolusi pendidikan bahasa dan memberikan kontribusi pada pencapaian hasil akuisisi bahasa yang lebih sukses bagi pembelajar dari berbagai usia dan latar belakang.

Kata Kunci: Pembelajaran Inovatif; Media Pembelajaran; Berbicara; 4C; Pembelajaran Abad 21

## 1. Introduction

Effective communication and speaking abilities play a crucial role in achieving success in academic and professional endeavors. According to [1], EFL (English as a Foreign Language) learners increasingly recognize the importance of mastering fluent and coherent English for communicative purposes. Among four language skills, speaking in a second or foreign language is widely acknowledged as the most challenging, requiring significant improvement for students. Hence, students must aim for fluency, coherence, a wide vocabulary, proper grammar, pronunciation, and precise communication. This notion is also supported by relevance studies conducted by Lezaraton [2] and Sosas [3] which focus on using interactive media in teaching speaking skill. In higher education, strong speaking skills hold great significance as they empower students to express their ideas, engage in critical discussions, and confidently present their work.

Traditional teaching methods often heavily rely on lectures, textbooks, and static presentations, which may not fully cater to diverse learning styles and preferences of students. However, the emergence of technology and the wide availability of multimedia resources offer educators new opportunities to enhance teaching and learning process. In their research, [4] explore the impact of technology on education, particularly in teaching and learning English Oral Skill. Their study emphasizes the necessity for a shift in teaching and assessment strategies to align with the advancements in digital technology. The conventional classroom approach is no longer the favored option, and educators, along with experts in EFL pedagogy, recognize the urgent need for a parallel shift in teaching methods at all educational levels.

Technology and multimedia resources present new opportunities for enhancing teaching and learning. Interactive videos, as an innovative medium, have significant potential in captivating students' interest and promoting active learning by blending visual, auditory, and kinesthetic elements. These videos can provide authentic and real-life language contexts, enabling students to practice speaking in a meaningful and motivating way. Moreover, video-based activities have the advantage of accommodating diverse learning styles and preferences, leading to a more enjoyable and effective learning process.

Research shows that incorporating multimedia components like interactive videos and YouTube videos can enhance students' pronunciation, grammar, vocabulary, fluency, and comprehension. According to [5], when faced with difficulties in speaking English, junior high school students can enhance both their speaking skills and motivation to study the language by incorporating interactive videos as a teaching tool. In a different study carried out by [6], the use of YouTube videos for teaching speaking skills led to noticeable improvements in students' pronunciation, intonation, grammar, vocabulary, fluency, and comprehension. Similarly, [4] found that utilizing interactive YouTube videos for teaching speaking skills to EFL students in Jordan resulted in positive outcomes, with significant enhancements in the speaking performance of participating students.

[7] Emphasizes the significance of equipping students with 21st-century skills, such as the 4Cs, to properly equip them for an unpredictable and challenging future. The 4Cs - Communication, Collaboration, Critical Thinking, and Creativity - have become increasingly prominent in contemporary education, considered vital for excelling in an interconnected world. Integrating the 4Cs into teaching methodologies equips students with comprehensive competencies beyond memorization, preparing them for an uncertain future.

The previous studies related to teaching oral skills had overlooked a crucial element which is the integration of 21st-century skills. Upon reviewing existing related literature, it becomes evident that prior research had not sufficiently addressed these essential skills, such as critical thinking, collaboration, and technological proficiency. This gap raises concerns about the relevance of previous findings in the present context, where these skills are increasingly crucial. Acknowledging this gap, this study explores the potential of designing interactive videos to enhance speaking skills in higher education, integrating the 4Cs to create a transformative learning environment that encourages active student participation and cultivates essential skills. Incorporating the 4Cs into EFL classes can enhance student engagement and transform regular grammar lessons into engaging experiences. Teachers play an active role as facilitators, while students become self-guided learners.

In the context of the Productive Oral Language Skill (POLS) course, challenges persist in developing students' weak English-speaking abilities and confidence in ineffective communication, particularly with the shift to blended learning due to the Covid-19 pandemic. 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.

### *1.1. Innovative Learning Media*

Learning media encompasses all tools and resources utilized to stimulate students' thoughts, feelings, attention, and skills, thereby encouraging the learning process. According to [8], deliberate instruction on media is essential for advancing student learning. Within the classroom, media plays a vital role in the continuity of learning. To foster an innovative and creative environment, academic media should be produced and integrated with educational learning media.

The typology of innovation has evolved, moving from a structured and well-defined technological system to a more extensive system comprising marketing, design, organizational, and social features [9]. Technological innovation serves as a catalyst for social and organizational change, while the perception of innovation revolves around humans' capacity to create novel and distinct ideas for their benefit [10].

Interactive videos can be used as a supplement to traditional teaching methods to improve students' English-speaking skills and motivation. [11] Highlights that learner motivation is positively impacted when language learning incorporates videos. Most students exhibit increased interest when they have the opportunity to witness language being used in real-life situations and hear it, especially when combined with engaging tasks. The use of authentic materials is further enhanced by students' enthusiasm for classroom activities, leading to heightened motivation to listen, understand, and learn. The use of videos proves to be an effective way to capture students' attention and increase their motivation in language learning.

The objective of the study is to develop and assess effective learning tools that enhance speaking skills through the integration of the 4Cs framework. By focusing on critical thinking, communication, collaboration, and creativity, the study aims to create learning media that not only facilitate language acquisition but also cultivate essential 21st-century skills. The specific goals include designing interactive and engaging learning materials that encourage critical reflection, effective communication, cooperative learning, and creative expression. Additionally, the study seeks to evaluate the impact of these innovative learning media on students' speaking proficiency, assessing both their language abilities and the development of the targeted 4Cs skills.

### 1.2. 21<sup>st</sup> Century of Learning

21st-century learning encompasses an educational approach that aligns with the demands and complexities of the contemporary world. It recognizes the need for developing essential competencies, often referred to as "21st-century skills," to prepare students for success in the digital, global, and interconnected society.

This modern learning paradigm emphasizes moving away from traditional teaching methods and standardized assessments, focusing instead on empowering students to become independent thinkers, problem solvers, and lifelong learners who can thrive in an ever-changing world. In the context of 21st-century education, the 4C skills play a crucial role in preparing students for success in an ever-changing world. The 4C skills are: (1) Critical Thinking: Encouraging students to analyze information, evaluate evidence, and think logically to solve complex problems. Critical thinking enables students to make informed decisions and draw well-reasoned conclusions; (2) Communication: Developing effective communication skills, both verbal and written, to express ideas clearly and interact with others confidently. In the digital age, communication also involves proficiency in using various forms of technology and media; (3) Collaboration: Emphasizing the importance of working collaboratively in teams and diverse groups. Collaborative skills enable students to cooperate, share ideas, and contribute their unique perspectives to achieve common goals; (4) Creativity: Fostering creative thinking and innovation. Students are encouraged to generate new ideas, think outside the box, and approach challenges with originality.

## 2. Methodology

This research adopts a Research and Development (R&D) approach, referring to [12] development model proposed by [13], which consists of five steps: investigation, designing, realization/construction, testing, evaluation, and revision, and implementation. The study was conducted at the Department of English Education, Faculty of Language and Arts, Universitas Negeri Medan, located at Jalan Willem Iskandar Pasar V, Medan. The research took place during the odd semester of the academic year 2023-2024. The data were collected using questionnaires created by the researcher based on relevant theories and transformed into instrument grids. The questionnaires were given to media experts, content experts, and respondents to assess the feasibility of the learning media product. Data were collected through interviews, questionnaires, and document analysis. Interviews identified the current needs, questionnaires were gauged the feedback from experts and students on the developed product, and document analysis provided additional information from relevant documents.

## 3. Data Analysis and Findings

The present study embraced a Research and Development (R&D) methodology, drawing from Plomp's (1997) developmental framework as adapted by Gustiani (2019). This approach involves five distinct stages: investigation, designing, realization/construction, testing, evaluation and revision, and implementation. The product to be developed is an interactive animated learning media for POLS (Productive Oral Language Skill) in the form of interactive videos using the *Powtoon* application. The procedure for developing the learning media in this research consists of the following steps:

### 3.1. Preliminary Investigation (Initial Stage)

In this stage, initial investigation is conducted to gather information, analyze the issues and needs of students in the POLS course, and formulate the development of a product that aligns with user requirements. This initial stage can also be divided into several activities: (a) Needs Analysis; (b) Material Selection; (c) Formulation of Objectives.

The results of the need analysis revealed that a significant portion of students showed a keen interest in enhancing their oral English skills for both academic and future professional reasons. A considerable number of them emphasized the significance of being able to actively engage in discussions, deliver impactful presentations, and participate in debates with confidence. Additionally, students acknowledged a variety of communication scenarios, including classroom

dialogues, team projects, public speaking engagements, and informal conversations. Many students underscored the value of acquiring speaking abilities that are directly applicable in real-world situations. In terms of the current speaking course, students provided valuable input, suggesting that incorporating more interactive and authentic activities could greatly enhance their learning journey. Hence, considering the findings of the needs analysis, a specific topic was selected from the semester lesson plan (RPS), namely “*Making Suggestions*” to serve as a prototype for the innovative learning media.

### 3.2. Design

In the design phase, the researcher created an initial product or prototype of the intended product. Activities within the design phase included designing the content, creating storyboards, writing scripts, designing graphics, animations, background designs, audio, videos, and visual layouts.

### 3.3. Realization/Construction



Fig. 1. The Design of the Innovative Learning Media

In this phase, the development of the interactive learning media for the Productive Oral Language Skill course was carried out based on 4Cs skills in animated videos, aligned with the learning objectives. Subsequently, the developed learning media underwent validation by two expert validators in the field of media and content, who were faculty members in the Department of English Language and Literature, Faculty of Language and Arts, Universitas Negeri Medan. The validation phase with experts was conducted to identify any errors or shortcomings in the initial design, allowing for improvements before proceeding to the next 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 data from the table "Expert Validation Feedback" represents the feedback provided by expert validators regarding the innovative learning media developed for the Productive Oral Language Skill course. The explanation of the table as per the following:

#### 3.3.1. Overall effectiveness of innovative learning media

This percentage indicates that 80% of the expert validators found the innovative learning media to be effective in enhancing the learning experience. This suggests that a significant portion of the experts recognized the positive impact of the media on students' language learning and communication skills.

#### 3.3.2. Clarity of content presentation

The data indicates that the majority of expert validators (85%) found the content presentation within the innovative learning media to be clear. This suggests that the media effectively conveyed the intended educational content to the learners.

### 3.3.3. Engagement level of students with the media

This percentage signifies that 75% of the expert validators observed that the innovative learning media successfully engaged students. This suggests that the media captured students' attention and motivated them to interact with the content.

### 3.3.4. Integration of 4Cs skills in the media

The data indicates that a significant majority of expert validators (95%) acknowledged the successful integration of 4Cs skills (Communication, Collaboration, Critical Thinking, and Creativity) within the developed media. This suggests that the media effectively promoted these essential skills among students.

### 3.3.5. Technical issues or improvements needed

This percentage suggests that a smaller proportion of expert validators (20%) identified technical issues or areas for improvement in the innovative learning media. This indicates that most aspects of the media were well-implemented, with a minority of technical concerns requiring attention for further refinement.

The assessment of the video by expert validators revealed positive outcomes for the innovative learning media based on the 4Cs framework. The evaluation process 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.

## 3.4. Testing and Evaluation

For testing the prototype video, a set of questionnaires were crafted by the researcher, formulated in accordance with relevant theories and subsequently organized into instrument grids. These questionnaires were administered to a variety of respondents, including media experts, content experts, and individuals in the learning community who were lecturers of Productive Oral Language Skills in the Department of English Language and Literature, Faculty of Language and Arts, Universitas Negeri Medan, with the aim of assessing the viability and feasibility of the developed learning media product.

The responses from participants indicate a positive reception of the integration of 4Cs skills (Communication, Collaboration, Critical Thinking, Creativity) 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. Additionally, about 90% of participants 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.

The open-ended comments and suggestions provided by participants offer additional insights into the interactive learning media's strengths and opportunities for enhancement. Many experts acknowledged the positive impact of the media in engaging students and promoting effective learning. Approximately 70% also offered suggestions for further optimizing certain aspects of the media, which will be taken into account in future iterations.

The evaluation of the data underscores the positive reception of the integrated 4Cs skills in animated videos for the Productive Oral Language Skill course. The alignment of the interactive learning media with learning objectives further enhances its effectiveness, while the expert suggestions contribute to its ongoing development. The data collectively signifies the media's potential to offer an engaging and impactful learning experience, aligned with contemporary educational principles and student needs.

The alignment of these interactive learning media with the course's learning objectives has emerged as a crucial factor contributing to their effectiveness. The incorporation of critical thinking, communication, collaboration, and creativity within the animated content not only resonates with contemporary educational principles but also addresses the diverse needs of students engaged in language learning. This synthesis of pedagogical principles and skill integration underscores the potential of the learning media to foster a robust and impactful learning experience.

Furthermore, the data highlights the significance of expert suggestions in the ongoing development of the animated learning media. The incorporation of insights from subject matter experts has proven instrumental in refining the content, ensuring its educational relevance and pedagogical efficacy. This continuous process, informed by expert feedback, signifies a commitment to continuous improvement and quality assurance in the educational resources. The findings

collectively underscore the promising trajectory of the animated videos for the Productive Oral Language Skill course, not only in terms of their immediate positive reception but also in their potential for ongoing refinement and enhancement based on pedagogical insights and evolving educational needs.

#### 4. Conclusion

This research introduces a comprehensive plan to create innovative learning materials for better speaking skills, based on the 4Cs: Critical Thinking, Communication, Collaboration, and Creativity. Good spoken communication is vital in language learning, but traditional methods often fall short. This study developed animated videos as learning tools for the Productive Oral Language Skills subject. Experts validated this approach, confirming its potential to enhance students' communication abilities. The 4Cs framework empowers learners to express themselves confidently. This research could revolutionize language education, benefiting learners of all ages and backgrounds. It contributes to improving teaching practices and creating engaging learning experiences.

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