

Developing an Interactive Audiovisual Media for Listening Assessment

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ABSTRACT

This study aims to overcome the limitations of traditional listening tests by designing and developing an interactive audiovisual evaluation tool to enhance listening assessment in higher education. The tool integrates interactive features and varied audiovisual content to provide a more dynamic and engaging assessment experience. The research focused on second-semester students of the Listening and Speaking for Formal Communication course in the English Education Department at Universitas PGRI Yogyakarta. The Research and Development (R&D) approach was implemented using the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation. Data were collected through lecturer interviews, student questionnaires, expert validations, classroom observations, and student feedback. The final product, developed using Microsoft PowerPoint, included a Home menu, Test Information, and three listening test sections tailored to students' learning needs. The Results indicate that each ADDIE stage contributed to the successful development of the audiovisual-based assessment tool. The prototype addressed limitations of conventional listening tests and proved effective during implementation, as students performed better and responded positively. Expert and learner evaluations confirmed its feasibility and practical in use. The findings demonstrate that multimedia-integrated assessment enhances authenticity, motivation, and comprehension in listening learning, while offering opportunities for future expansion to web- or mobile-based platforms.

Keywords: Assessment, Audiovisual, Interactive, Listening, Research and development

1. INTRODUCTION

Language learning is a multifaceted process that requires the development of four fundamental skills: listening, speaking, reading, and writing. These skills function in an integrated manner to enable effective communication and comprehension (Sharma & Puri, 2021). Among them, listening is often considered the foundation of language acquisition, as it serves both as a medium of understanding spoken input and as a means for internalizing linguistic patterns. Scholars have long emphasized that listening plays a central role in language learning because it facilitates vocabulary acquisition, reinforces pronunciation, and

enhances comprehension through exposure to authentic language use (Yurko & Styfanyshyn, 2020).

In the context of English language education, listening is not only a receptive skill but also a critical cognitive process that involves decoding, interpreting, and responding to auditory input in real time. (Richard, 2008) distinguished two essential pedagogical orientations to teaching listening: listening as comprehension, which focuses on understanding and interpreting meaning, and listening as acquisition, which emphasizes the internalization of language through exposure. Both processes are vital in developing learners' overall communicative competence. However, despite its importance, listening remains one of the most challenging skills to assess accurately, as it requires learners to process oral input, comprehend meaning, and respond under time and cognitive pressure (Rohaniyah & Nasrullah, 2022).

To teach and assess listening effectively, educators must recognize its types and underlying processes. (Raju, 2018) notes that listening varies according to purpose, with discriminative and comprehensive listening forming the foundation of all listening behavior. Discriminative listening, which begins in infancy, involves distinguishing between different sounds and voices to identify emotions and intentions. Comprehensive listening, on the other hand, entails understanding meaning through verbal and nonverbal cues such as gestures and tone. Building upon these, scholars have identified further approaches—particularly extensive and intensive listening. Extensive listening exposes learners to large amounts of comprehensible and enjoyable input to build fluency and confidence, while intensive listening trains learners to focus on details like pronunciation, grammar, and vocabulary for greater accuracy (Renandya & Widodo, 2016). Together, these approaches complement each other, helping learners develop balanced listening proficiency.

In addition, two major frameworks guide how listeners process auditory information: bottom-up and top-down processing. Bottom-up processing focuses on decoding sounds and words to build meaning from linguistic elements (Vandergrift & Goh, 2014), whereas top-down processing relies on prior knowledge and context to interpret messages (Nation & Newton, 2008). Integrating both—an interactive processing approach—is considered the most effective strategy for teaching and assessing listening comprehension (Gilakjani & Sabouri, 2016).

Despite its recognized importance, listening assessment in many educational settings remains traditional. Teachers often depend on audio recordings and multiple-choice questions that measure surface-level comprehension but neglect higher-order cognitive skills such as inference and synthesis. These methods also fail to reflect authentic listening contexts, such as multimedia lectures or visual-supported communication, that learners face in real life. Preliminary interviews and classroom observations reveal that lecturers find audio-only assessments inadequate for evaluating comprehensive listening skills, while students report challenges with fast speech, unfamiliar accents, and limited contextual cues. Both groups highlight the need for more engaging, contextualized, and interactive assessment tools that mirror real-world communication.

To address these issues, researchers and educators have begun integrating instructional media into listening instruction and assessment. (Andriani et al., 2022) define learning media as tools—both hardware and software—that support the delivery of learning materials. These media can be visual (e.g., charts, images, videos), audio (e.g., recordings, podcasts), or audiovisual (e.g., interactive videos or multimedia presentations). Audiovisual media are particularly effective because they combine auditory and visual input, helping learners interpret meaning more accurately and engage more deeply (Othman, 2024). Studies have shown that audiovisual materials enhance motivation and listening comprehension by providing visual context and reducing cognitive load (Atiyah et al., 2012); (Pham, 2021).

Assessment is an essential component of language education because it provides evidence of students' progress and learning outcomes (Boud & Falchikov, 2017). Effective assessment not only measures achievement but also directs attention to key learning goals. Traditionally, assessments are categorized into formative—conducted during instruction to provide feedback—and summative—conducted at the end of instruction to evaluate achievement (Kemendikbud, 2022).

Several studies provide empirical support for the integration of multimedia in English language learning. (Puspitasari & Sintia, 2021) developed English audio media for seventh-grade listening lessons and found significant improvements in comprehension. (Marlena et al., 2019) demonstrated that PowToon-based audiovisual media enhanced students' critical thinking and engagement. Similarly, (Pertiwi, 2020) showed that using the Quizizz platform as an assessment tool increased students' motivation and participation. (Kuswanto et al., 2021) developed Android-based media for English subjects, which students rated as

engaging and effective. (Rosmiati et al., 2020) also highlighted the benefits of interactive animations in improving students' understanding and interest in learning English.

Building upon these findings, the present study proposes the development of interactive audiovisual-based assessment media for evaluating listening skills. This approach integrates visual cues, contextual elements, and interactive features to create more authentic and engaging listening assessments. By combining the principles of multimedia learning with communicative language assessment, this research aims to bridge the gap between traditional testing and technology-enhanced evaluation. The novelty of this study lies in its focus on dynamic, multimedia-based listening assessment that promotes deeper comprehension, learner motivation, and equitable access to language evaluation tools.

Listening remains a cornerstone of language acquisition and communicative competence. Its effective teaching and assessment require the integration of pedagogical, technological, and psychological perspectives. Through the incorporation of interactive audiovisual media, this research seeks to transform listening assessment into a more authentic, learner-centered, and engaging process that aligns with the demands of digital-age education. Assessment plays a crucial role in supporting learning by providing information about students' achievement and progress (Boud & Falchikov, 2017). However, in many educational settings, listening assessments remain largely traditional, relying on audio recordings and multiple-choice questions. While these methods are efficient in measuring basic comprehension, they often fail to capture higher-order cognitive abilities such as inference, critical thinking, and synthesis. Furthermore, they do not represent authentic listening contexts—such as multimedia presentations, online lectures, or visual-supported communication—that learners commonly encounter in academic and professional settings.

Preliminary interviews with English lecturers and classroom observations further confirm these limitations. Lecturers report that audio-only assessments do not adequately evaluate students' comprehensive listening skills, while students express difficulties related to fast speech, unfamiliar accents, anxiety, and lack of contextual cues. Both groups highlight the need for more engaging, contextualized, and interactive assessment tools that reflect real-life communication. To address these challenges, this study proposes the development of interactive audiovisual-based assessment media for evaluating listening skills. By integrating visual cues, contextual depth, and interactive features, this innovative approach aims to provide a more authentic, engaging, and equitable assessment experience. It draws

upon principles of multimedia learning and learner engagement, offering an assessment model that not only measures comprehension more effectively but also motivates students and supports diverse learning needs.

The novelty of this research lies in its integration of interactive audiovisual elements within listening assessment, bridging the gap between technological advancements and traditional assessment practices. Unlike conventional audio-based tests, the proposed model allows learners to engage with dynamic multimedia stimuli, promoting deeper comprehension and real-time cognitive processing. The outcomes of this study are expected to enrich the theoretical framework of language assessment and contribute to the practical design of accessible, flexible, and motivating tools for both educators and students.

In sum, this research introduces an innovative approach to listening assessment that aligns pedagogical goals with technological affordances. By transforming the way listening comprehension is measured and experienced, it aspires to enhance language assessment practices and promote more meaningful, learner-centered education in the digital era.

2. RESEARCH METHOD

This study employed a Research and Development (R&D) approach using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The ADDIE framework provides a systematic process for creating effective instructional products through iterative testing and refinement (Widyastuti & Susiana, 2019). This model was chosen for its structured and synergistic stages, allowing the development of assessment media that align with learners' needs and pedagogical goals.

The ADDIE research paradigm was chosen by researchers because of its systematic steps, making it possible for all ADDIE stages analysis, design, development, implementation, and evaluation to provide a synergistic effect that can help the assessment media development process

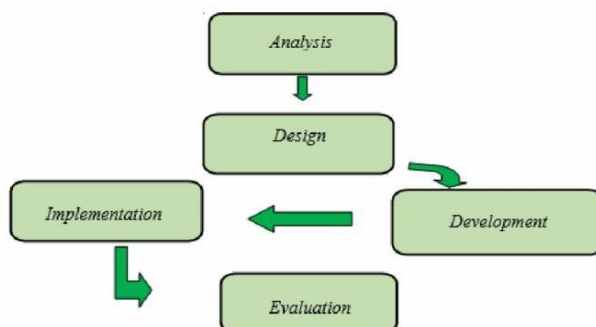


Figure 1.1 ADDIE Model

The Research and Development (R&D) procedures using the ADDIE model began with the Analysis stage, which identified the needs, challenges, and preferences of students and lecturers in the listening assessment process. Data were gathered through classroom observations, interviews, and questionnaires to reveal gaps in existing practices. In the Design stage, a blueprint for the interactive audiovisual-based assessment media was created by selecting suitable content, determining multimedia elements, and integrating interactive components aligned with learning objectives. The Development stage involved creating the prototype, organizing materials, and designing assessment activities. Media and material experts validated the prototype to ensure content accuracy, instructional quality, and technical feasibility.

During the Implementation stage, the validated media were used in listening classes with second-semester students of the English Education Department at Universitas PGRI Yogyakarta, with student engagement and performance closely observed. Finally, the Evaluation phase assessed the effectiveness of the media through student responses, expert validation, and classroom observations. Both formative and summative evaluations were conducted to determine the usability, engagement level, and overall contribution of the media to learning outcomes. The research was conducted with second-semester students of the English Education Study Program at Universitas PGRI Yogyakarta. The data sources included one material expert, one media expert, one English lecturer, and the participating students.

The research employed five instruments to collect data. An observation sheet was used to record classroom practices and the use of current assessment media, while interview guidelines helped explore lecturers' perspectives on listening assessment. A student needs

questionnaire identified learners' preferences and challenges, and feasibility questionnaires were administered to material and media experts to evaluate the product's quality, accuracy, and presentation. Additionally, a student response form was distributed to gather feedback on the usability, attractiveness, and effectiveness of the audiovisual assessment media.

Data collection was conducted through several techniques. Observation and interviews were used to identify learning needs and existing classroom practices. Validation questionnaires were completed by material and media experts, and student response questionnaires were administered after the implementation of the audiovisual media. These combined methods ensured comprehensive insights into both expert and student perspectives.

For data analysis, quantitative questionnaire results were processed using Likert-scale scoring to determine levels of agreement and perceived quality, following guidelines from (Nemoto & Beglar, 2014). The score interpretation ranged from Very Poor (0–1.00) to Very Good (4.01–5.00). Descriptive analysis was applied to interpret expert validation results and student responses, while qualitative feedback from interviews and open-ended questions was analyzed thematically to complement the quantitative findings.

3. RESULTS AND ANALYSIS

An interactive audiovisual listening assessment was designed through this study, demonstrating validity and practical applicability. The results from each step of the development process are presented in the following sections.

3.1. Analysis

The needs analysis sought to identify the pedagogical challenges associated with existing listening assessments and to determine the necessity of developing more contextual and interactive evaluation tools. Both student performance trends and lecturer insights indicated a considerable gap in conventional assessment formats, which predominantly rely on audio-only recordings and paper-based question sets.

An interview conducted on June 5 with a lecturer from the English Education Study Program provided critical input for media development. The lecturer explained that current assessments typically use audio recordings accompanied by multiple-choice or short-answer items sourced from British Council and TOEFL materials. While these tools measure basic comprehension, they often fail to reflect the realities of academic and real-world

communication, which involve visual cues, multimodal processing, and dynamic situational contexts. The lecturer further highlighted that students frequently struggle with sustaining concentration, understanding rapid speech, and coping with unfamiliar accents—challenges exacerbated by anxiety during summative testing.

The lecturer emphasized that audiovisual media can support comprehension by integrating visual cues such as gestures, facial expressions, and accompanying imagery, which contribute to more authentic and contextualized listening environments. The interview also identified key criteria for an effective assessment tool, including the use of authentic academic content, interactive components, clear instructions, appropriate difficulty levels, and coverage of both literal and inferential comprehension. These insights strongly justified the development of Audiovisual Media tailored to the needs of second-semester students

3.2. Design

Based on the findings of the needs analysis, the design phase focused on developing a blueprint for an engaging and pedagogically appropriate audiovisual assessment tool. The design emphasized clarity, interactivity, visual appeal, and alignment with listening learning objectives. Each component—from question types to interface navigation—was structured to support students' comprehension and reduce cognitive overload.

The media integrates video clips, images, text, and animations to support the listening process. Students can navigate the media according to instructions provided by the researcher, enabling a more autonomous assessment experience. The choice of visuals and animation effects was intentionally incorporated to increase motivation and promote sustained engagement. These features also help students decode meaning through multimodal cues, thereby enriching their listening comprehension process. The design ensured that the assessment tool met the cognitive, linguistic, and affective needs of early-semester English majors. The result is a flexible medium that can be adapted to various types of listening tasks and instructional goals.

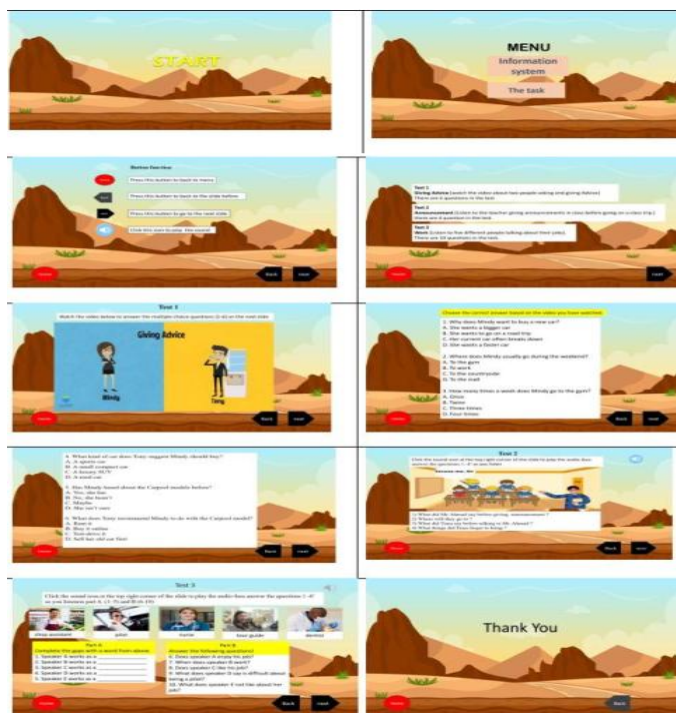


Figure 3.1 The Result of Designing Product

3.3. Development

The development stage transformed the design into a functional audiovisual assessment tool. The tool was constructed using a multimodal framework, combining audio narration, video scenes, thematic illustrations, and contextual images. The listening assessment was divided into three sections, each containing tasks that required students to interpret information presented in multimedia formats.

Each section employed different thematic scenarios, designed to evaluate both lower-order skills (identifying specific information and main ideas) and higher-order skills (inferring meaning, interpreting implied content, and understanding speaker intention). The combination of visual and auditory elements allowed students to process information more effectively and provided a richer context for listening comprehension tasks.

The media was also designed with user-friendly features to ensure accessibility for students with varying levels of digital literacy. This stage confirmed that the assessment tool was operational, visually appealing, and aligned with the intended learning outcomes.

3.4. Implementation

The implementation stage was conducted on June 12, 2025, involving 21 second-semester students. The assessment session began with a demonstration on how to operate

the audiovisual media, followed by the distribution of answer sheets. Students were given 45 minutes to complete the tasks independently.

Throughout the assessment, students actively interacted with the audiovisual materials. Visual cues and thematic illustrations provided valuable support for decoding meaning, while the dynamic and multimodal format fostered higher engagement than traditional audio-only assessments. Classroom observations indicated that students were more focused, attentive, and confident while completing the tasks.

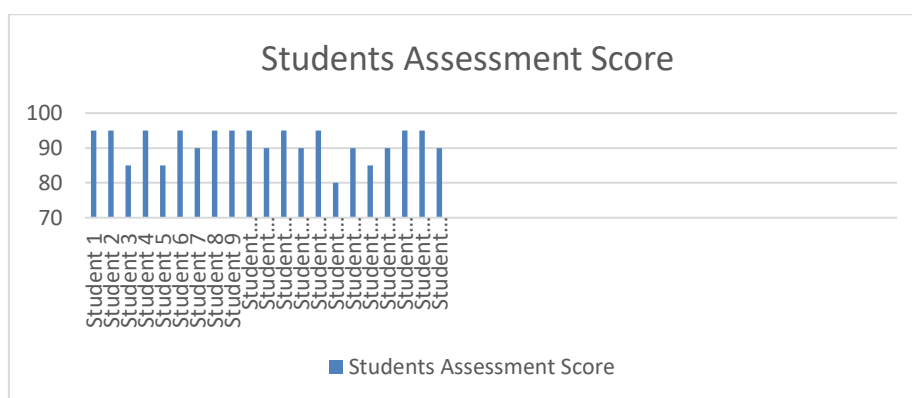


Chart 3.1. Students Assessment Score

Scores obtained by the 21 students ranged from 80 to 95. A total of 18 students scored 90 and above, while only one student scored below 85. This distribution suggests that students were able to comprehend the audiovisual input effectively and benefited from the supporting visual context. The consistently high scores reflect both the suitability of the media and the accessibility of the tasks. The implementation results indicate that the Audiovisual Media effectively facilitated student comprehension and provided a more supportive and enjoyable assessment experience.

3.5. Evaluation

The evaluation stage assessed the feasibility and quality of the media through expert validation. Two experts—one in content/material development and one in media design—evaluated the tool based on content appropriateness, language accuracy, presentation quality, and screen display features.

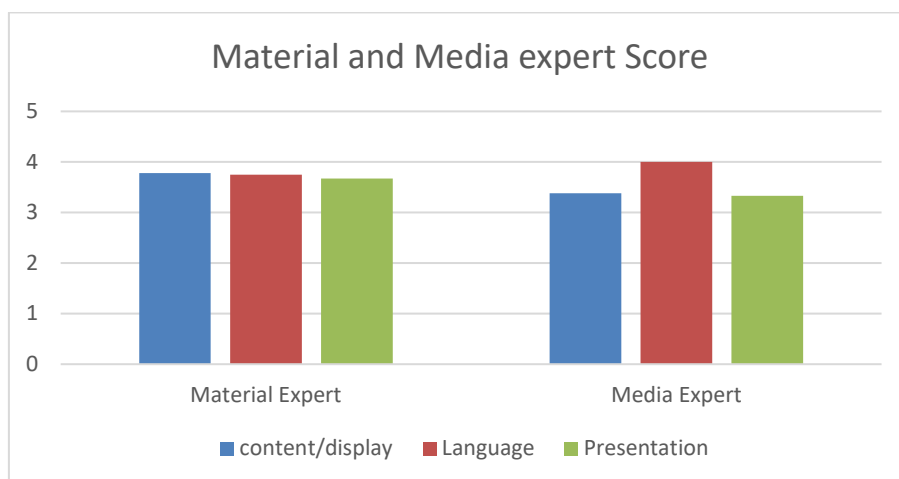


Chart 3.2. Material and Media Expert Score

The material expert evaluated the audiovisual assessment tool across three main aspects. First, content appropriateness received a mean score of 3.78, categorized as Good. This indicates that the material aligns well with the intended learning objectives, presents relevant academic content, and matches the students' proficiency levels. Second, the expert assessed language appropriateness, which obtained a mean score of 3.75 (Good). The expert confirmed that the language used across instructions, audio, and written text was clear, grammatically accurate, and developmentally suitable for the learners. Lastly, presentation appropriateness was rated with a mean score of 3.67 (Good), showing that the sequencing of material was coherent and supportive of students' ability to work independently.

The media expert focused on the technical and visual design components of the audiovisual tool. The evaluation of screen display resulted in a mean score of 3.38 (Good), indicating an overall visually appealing design, though some enhancements—particularly regarding image accuracy and text sharpness—were recommended. Meanwhile, language suitability earned a perfect mean score of 4.00 (Very Good), demonstrating that the wording used throughout the media was exceptionally clear, consistent, and appropriate. Finally, presentation suitability received a mean score of 3.33 (Good), suggesting that the integration of multimedia elements was coherent and effectively supported the learning and assessment processes.

This research contributes to the development and evaluation of audiovisual-based assessment media for listening skills; however, several limitations must be acknowledged. First, the number of participants in the evaluation process was limited to a small group of English language learners and a few material and media experts. This narrow sample size reduces the generalizability of the findings, particularly when considering broader

populations with diverse linguistic backgrounds and proficiency levels. Second, the audiovisual media developed in this study was restricted to a PowerPoint format. Although this format is widely accessible, it presented several technical challenges, as some students experienced audio-playback issues or difficulty opening files on certain devices—especially mobile devices. These constraints highlight the need to develop the media into a more flexible, universally compatible platform. Third, due to time and resource limitations, the media was tested only on a small scale and has not yet been fully integrated into the wider instructional curriculum. Consequently, further research conducted over a longer period and across various learning contexts is recommended to assess the long-term impact, usability, and overall effectiveness of the audiovisual assessment media more comprehensively.

4. CONCLUSION

This study successfully developed interactive audiovisual-based assessment media to enhance students' listening skills using the ADDIE development model. The research objectives stated in the Introduction—to create valid, practical, and engaging media for assessing English listening comprehension—were achieved through systematic analysis, design, development, implementation, and evaluation phases.

The Results and Discussion confirm that each stage contributed significantly to the final product. The Analysis phase identified the limitations of conventional listening assessments, while the Design and Development phases produced and refined a contextually relevant audiovisual prototype. The Implementation phase demonstrated that students performed better and responded positively to the media, and the Evaluation phase validated its feasibility and effectiveness based on expert and learner feedback.

These outcomes show strong alignment between the study's initial expectations and its results, proving that audiovisual-based assessment can create a more authentic and motivating learning environment. Furthermore, this study offers practical and theoretical implications: it demonstrates that integrating multimedia elements in assessment can strengthen comprehension, learner engagement, and critical thinking in language learning.

For future development, the findings open opportunities to extend this innovation into web-based or mobile platforms to ensure broader accessibility and interactivity. Longitudinal studies are also recommended to measure the long-term impact of audiovisual assessments on listening proficiency. Overall, this research provides a promising foundation

for the advancement of technology-enhanced language assessment and supports continuous innovation in English language education.

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