Developing "KUPENG" Audio Web-Based Learning for Listening in Seventh Grade Students

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Abstract: This research aims to develop "Kupeng" Audio Web-Based learning media to improve listening skills of seventh-grade students. The research method employed Research and Development with six stages including problem analysis, design and development, expert validation, teacher and student responses, evaluation and revision, and final product. Research subjects were English teachers and 50 seventh-grade students of MTs Al Muhtadun Jabung selected through purposive sampling. Research instruments included structured interviews, participant observation, documentation analysis, and Likert scale questionnaires. Material expert validation results achieved 84.4% with very valid category, while media expert validation reached 90% with very valid category. Student responses showed 94% satisfaction level for material clarity and 90% for audio quality. Teacher responses demonstrated 100% agreement on ease of use and grade-level appropriateness aspects. The "Kupeng" platform proved effective in addressing listening learning media limitations by providing high-quality audio content in three difficulty levels aligned with 2013 curriculum basic competencies.

INTRODUCTION

The learning process encompasses multiple interconnected elements including educators, learners, materials, media, and instructional strategies. These components work synergistically to create meaningful educational experiences that foster intellectual development and stimulate learners' curiosity. Learning fundamentally represents an activity designed to guide students toward self-maturation while providing them with new knowledge that transforms their personalities for the better. Students acquire new knowledge primarily through auditory input, making listening skills foundational to language acquisition (Sadiku, 2015).

Listening constitutes the primary language skill developed from birth, serving as the cornerstone of language acquisition processes (Renukadevi, 2014). Research indicates that effective communication relies heavily on listening comprehension, accounting for approximately 45% of language competence,

compared to 30% for speaking, 15% for reading, and 10% for writing. This distribution underscores listening's critical role in foreign language learning success. Students developing proficient listening skills demonstrate enhanced vocabulary acquisition, improved pronunciation, better accent recognition, and superior intonation patterns. Through listening activities, learners simultaneously develop complementary skills including speaking, reading, and writing while mastering essential linguistic elements such as grammar structures and lexical knowledge (Arsyad A, 2011).

Educational media plays a pivotal role in facilitating cognitive skill development and academic achievement among young learners. Effective instructional media enhances student engagement and supports successful listening comprehension development (Kirkorian et al., 2008). Contemporary educational challenges, particularly those emerging during the global pandemic, have necessitated innovative approaches to content delivery and skill development. Educators must identify effective strategies for delivering listening materials successfully while students engage in remote learning environments (Sanaky, 2009).

Technology-based media offers significant advantages for addressing these educational challenges, providing accessible, cost-effective, environmentally sustainable, and practical solutions. These digital platforms enable educators to share listening materials efficiently while supporting interactive learning experiences. The integration of technological tools in education represents a natural evolution in pedagogical practice, leveraging scientific and technological advances to enhance instructional effectiveness across educational institutions. Current research reveals three primary challenges affecting listening instruction in Indonesian educational contexts. First, insufficient learning media specifically designed for listening skill development limits instructional effectiveness. Educators frequently lack appropriate technological tools and resources necessary for delivering comprehensive listening instruction. Second, inadequate listening materials fail to meet students' developmental needs and curricular requirements. Traditional textbooks and *worksheets* often omit listening components, creating

gaps in comprehensive language instruction. Third, students demonstrate limited listening proficiency due to insufficient exposure and practice opportunities (Sadiman, 2006).

Web-based technology presents a viable solution for addressing these educational challenges. *World Wide Web* platforms, introduced in the 1990s, provide comprehensive documentation storage and sharing capabilities across interconnected server networks. These systems utilize *Hypertext Markup Language* (HTML) formatting to create accessible, multimedia-rich educational resources. Web-based learning, recognized as a form of *electronic learning* (*e-learning*), offers flexible, scalable instructional delivery methods suitable for diverse educational contexts (Am, 2011).

Previous research has explored various aspects of web-based listening instruction, including software applications for listening material preparation and online resources for extensive listening practice. However, limited research has focused specifically on developing comprehensive web-based listening platforms tailored for Indonesian junior high school contexts. This gap represents a significant opportunity for educational innovation and student support. The "Kupeng" (*ear* in Javanese) Audio Web-Based platform addresses these identified challenges by providing accessible, engaging listening instruction specifically designed for seventh-grade students. This innovative approach leverages blog-based technology to deliver audio-rich content that supports listening skill development while accommodating remote learning requirements. The platform's design prioritizes user accessibility, multimedia integration, and pedagogical effectiveness. **PROBLEM FORMULATION**: How can the development and implementation of "Kupeng" Audio Web-Based media enhance listening skill acquisition among seventh-grade students at MTs Al Muhtadun Jabung, and what are the responses of teachers and students to this innovative instructional approach?

RESEARCH METHODS

This study employed a mixed-methods Research and Development (R&D) approach to develop "kupeng" audio web-based media for teaching listening skills

to seventh-grade students. The research utilized both qualitative and quantitative data collection methods to comprehensively evaluate the product development and student responses (Prastowo, 2012).

Research Design

The study adopted Sugiyono's R&D framework, simplified into six phases due to time constraints and pandemic limitations: (1) Analysis of Potential Problem and Solution, (2) Design and Development, (3) Expert Validation and Revision, (4) Teacher and Student Response, (5) Evaluation and Revision, and (6) Final Product and Publication.
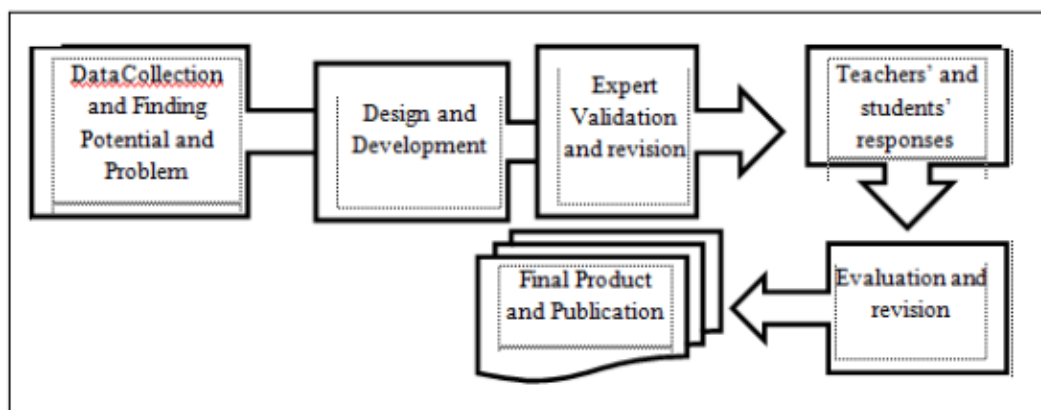

Figure 1. Research and Development Design of this research adapted from Sugiyono

Subjects and Materials

The research was conducted at MTs Al Muhtadun Jabung, selected based on accreditation status and K13 curriculum implementation. Participants included English teachers and seventh-grade students, with sampling determined through purposive sampling technique for key informants and snowball sampling for extended participants. The final sample comprised five teachers and thirteen students (five male, eight female) based on teacher recommendations (Sugiyono, 2013).

Data Collection Instruments

Multiple data collection techniques were employed: structured interviews using prepared guidelines and tape recordings, participant observation with standardized checklists, and documentation analysis including student scores and textbooks. For quantitative data, a 20-item closed questionnaire utilizing five-point

Likert scale was distributed to respondents (Strongly Agree=5, Agree=4, Neutral=3, Disagree=2, Strongly Disagree=1).

Expert Validation

The product underwent validation by six experts: three material experts (focusing on content worthiness, language, and presentation aspects) and three media experts (evaluating operation, display forms, and benefits). Validation scores were calculated using the formula SK = n.p.r, where SK represents criteria score, n maximum score, p total item questions, and r total subjects.

Data Analysis

Quantitative data were analyzed using percentage calculations: Percentage (%) = Score (n)/Score maximal × 100, with interpretation criteria adapted from Sugiyono as presented in Table 1.

Table 1. Range Percentage and Qualitative Criteria

Percentage	Category
81% < score <100%	Very Good
61% < score < 80%	Good
41% < score < 60%	Fair
21% < score < 40%	Poor
0% < score < 20%	Very Poor

Expert validation scores were calculated using the formula SK = n.p.r, where SK represents criteria score, n maximum score, p total item questions, and r total subjects. Validation categories followed Sugiyono's criteria: 81-100% (Very Valid), 61-80% (Valid), 41-60% (Valid Enough), 21-40% (Less Valid), 0-20% (Not Valid). Qualitative data analysis followed Miles and Huberman's interactive model involving data reduction, data display through narrative text, and conclusion drawing with verification for credibility assurance.

RESULTS AND DISCUSSION

Development Process and Product Validation

The development of *Kupeng* audio web-based learning media followed a systematic six-phase approach adapted from research and development

methodology. The preliminary analysis revealed significant gaps in listening skill instruction at the seventh-grade level, particularly in the availability of appropriate media and materials aligned with basic competencies 3.5 and 3.7 of the 2013 curriculum. Field studies conducted at MTs Al Muhtadun Jabung confirmed three primary challenges: insufficient learning media for listening skills, inadequate listening materials, and limited student abilities in listening comprehension (Rusman, 2011).

Product Design and Development Results

The *Kupeng* audio web-based platform was designed as a comprehensive learning solution comprising two main components: a website interface and accompanying guidebooks. The website structure incorporated three thematic chapters focusing on descriptive texts about animals, objects, and people. Each chapter featured three difficulty levels (basic, medium, and advanced) with distinct assessment formats: multiple choice questions for basic level, true/false items for medium level, and fill-in-the-blank exercises for advanced level (Purwanto, 2007).
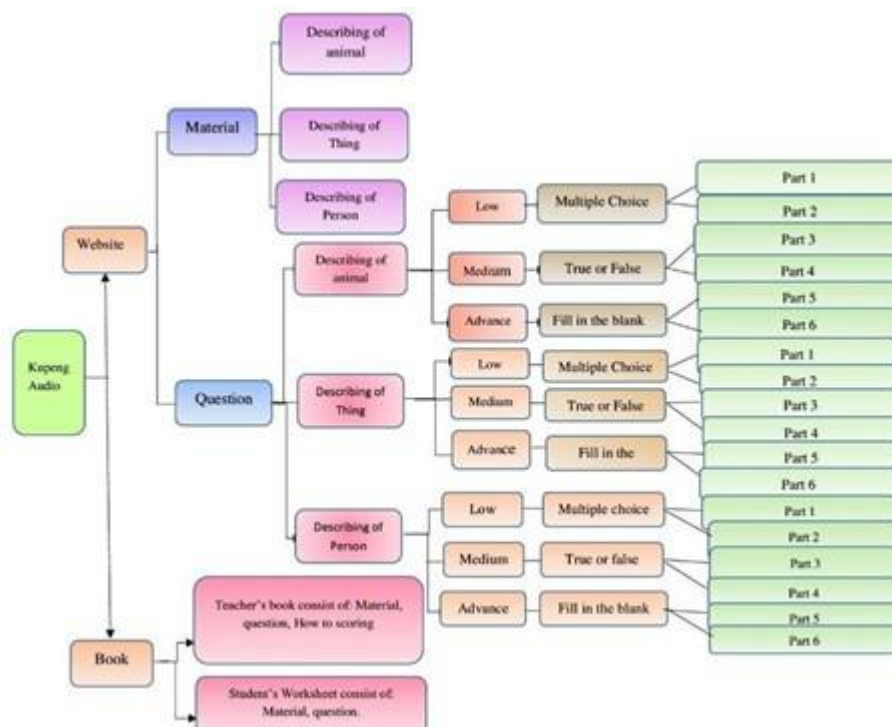

Figure 2. Hypothetical Model of Kupeng Audio Web-based Platform

The final product included teacher and student guidebooks containing preface, table of contents, materials, questions, answers, and references. The web-based interface was designed for accessibility across multiple devices including laptops, computers, and mobile phones, requiring only internet connectivity for operation (Brown, 2010).

Expert Validation Results

Material expert validation involved three specialists who evaluated the product across four key aspects: alignment with curriculum standards (KI & KD), material quality, language usage, and educational benefits. The validation process yielded highly positive results across all evaluation criteria (Brewster & Bowen, 2004).

Table 2. Material Validators Assessment Results

Aspect	Items	Expert 1	Expert 2	Expert 3	Total Score	Max Score	Percentage	Criteria
KI & KD Suitability	1-4	17	16	16	49	60	82%	Very Valid
Material Quality	5-8	17	16	17	50	60	83%	Very Valid
Language Usage	9-13	23	22	20	65	75	87%	Very Valid
Benefits	14-15	8	9	9	26	30	87%	Very Valid
Total		**65**	**63**	**62**	**190**	**225**	**84.4%**	**Very Valid**

The material validation demonstrated strong consensus among experts regarding curriculum alignment, with 87% agreement on the first aspect. Language usage received particularly high validation at 87%, indicating appropriate vocabulary selection and clear instructional language for seventh-grade students. Expert feedback highlighted the need for simplified vocabulary and shorter listening texts at basic levels, with suggestions for improved grammar and punctuation to enhance student comprehension. Media expert validation encompassed five evaluation dimensions: operational functionality, website design and display, guidebook cover design, content layout, and educational benefits.

Three media specialists assessed these aspects using the same five-point Likert scale (Bakri, 2011).

Table 3. Media Validators Assessment Results

Aspect	Items	Expert 1	Expert 2	Expert 3	Total Score	Max Score	Percentage	Criteria
Operation	1-4	20	19	17	56	60	93%	Very Valid
Website Display	5-9	22	20	19	61	75	81%	Very Valid
Guidebook Cover	10-11	7	6	7	20	30	67%	Valid
Content Layout	12-14	15	14	11	40	45	89%	Very Valid
Benefits	15-17	15	14	13	42	45	93%	Very Valid
Total		**79**	**73**	**67**	**219**	**255**	**90%**	**Very Valid**

Media validation results indicated exceptional performance in operational functionality and educational benefits, both achieving 93% validation scores. Website display elements received 81% validation, while guidebook cover design scored 67%, suggesting areas for visual enhancement. Expert recommendations focused on improving color contrast and template selection for better visual appeal to seventh-grade students. The combined validation from material and media experts yielded an overall validity score of 87.2%, categorized as "Very Valid" according to established criteria. This validation confirmed the product's readiness for field testing and implementation (Fitria et al., 2024).

Teacher and Student Response Analysis

Field testing involved 50 seventh-grade students selected through purposive random sampling and three English teachers at MTs Al Muhtadun Jabung. The testing was conducted in stages during August 2021, following COVID-19 protocols with home-based sessions.

Table 4. Student Perception Results Summary

Statement Category	Absolutely Agree	Agree	Neutral	Response Pattern
Website Design Interest	70%	10%	20%	Highly Positive
Ease of Use	76%	24%	0%	Universally Positive
Material Comprehension	90%	10%	0%	Excellent Reception
Listening Skill Enhancement	70%	30%	0%	Strong Agreement
Motivation Improvement	40%	40%	20%	Positive Response
Question Support	28%	40%	32%	Moderate Support
Daily Life Relevance	90%	10%	0%	Excellent

				Alignment
Material Clarity	94%	6%	0%	Outstanding Clarity
Audio Quality	90%	10%	0%	Superior Audio
Text Readability	88%	12%	0%	Excellent Readability

Student responses demonstrated overwhelmingly positive reception across all evaluation criteria. Material clarity achieved the highest approval rating at 94%, followed by daily life relevance and audio quality at 90%. The data revealed no negative responses (disagree or strongly disagree) across any evaluation dimension, indicating strong student acceptance and engagement with the platform. Qualitative feedback from student interviews revealed three key themes: accessibility and convenience, learning effectiveness, and practice opportunity enhancement. Students particularly valued the platform's flexibility, allowing independent listening practice at any time and location (Mudjiono, 2013). The unique name "*Kupeng*" generated positive interest and curiosity among students.

Table 5. Teacher Perception Results Summary

Statement Category	Absolutely Agree	Agree	Neutral	Response Pattern
Website Design Appeal	33.3%	33.3%	33.3%	Mixed Response
Ease of Use	100%	0%	0%	Universal Agreement
Teaching Support	67%	33.3%	0%	Strong Support
Grade-Level Appropriateness	100%	0%	0%	Perfect Alignment
Teaching Facilitation	67%	33.3%	0%	Strong Facilitation
Material Delivery Support	100%	0%	0%	Complete Support
Daily Life Connection	33.3%	67%	0%	Positive Connection
Material Comprehensibility	100%	0%	0%	Perfect Clarity
Audio Quality	100%	0%	0%	Excellent Quality
Text Readability	100%	0%	0%	Superior Readability

Teacher evaluation results showed exceptional performance in technical and pedagogical aspects, with 100% agreement on ease of use, grade-level appropriateness, material delivery support, comprehensibility, audio quality, and text readability. Teachers particularly appreciated the platform's simplicity and effectiveness as an alternative teaching resource, especially for educators less comfortable with complex technology integration. Teacher interview data revealed

three primary benefits: operational simplicity for educators of varying technological proficiency, effective alternative teaching resource, and student engagement enhancement. However, teachers suggested improvements in medium-level instructions and scoring system integration for comprehensive assessment tracking (Fauziati, 2015).

Product Refinement and Implementation

Based on validation feedback and user testing results, several refinements were implemented. Material complexity was adjusted for appropriate grade-level difficulty, question formats were optimized across difficulty levels, and website interface elements were enhanced for better visual appeal and user navigation. The final product incorporated all suggested improvements while maintaining the core educational objectives and technical functionality. The development process demonstrated successful integration of curriculum requirements, expert validation, and user feedback to create an effective web-based listening instruction tool. The high validation scores (84.4% material validation, 90% media validation) and positive user responses (no negative feedback from students or teachers) confirmed the product's educational value and practical applicability for seventh-grade English listening instruction. These results align with contemporary research supporting technology-enhanced language learning, particularly in developing listening skills through multimedia platforms. The *Kupeng* audio web-based system successfully addresses identified gaps in listening instruction resources while providing flexible, accessible, and engaging learning experiences for both students and teachers in the junior high school context.

CONCLUSIONS AND RECOMMENDATIONS
CONCLUSIONS

The development of "Kupeng" Audio Web-Based learning media for seventh-grade students' listening instruction has been successfully implemented through a Research and Development methodology comprising six stages adapted from Sugiyono's framework. Material expert validation results demonstrated a very valid category with 84.4% validity percentage, while media expert validation

achieved 90% with a very valid category. The implementation of this web-based platform effectively enhanced listening skills among seventh-grade students at MTs Al Muhtadun Jabung, evidenced through positive responses from 50 students with satisfaction levels reaching 94% for material clarity aspects and 90% for audio quality and daily life relevance. Teacher responses indicated excellent acceptance with 100% agreement on ease of use, grade-level appropriateness, and material delivery support aspects. The "Kupeng" platform successfully addressed three primary challenges in listening instruction including limited learning media, inadequate listening materials, and students' restricted listening comprehension abilities through the provision of high-quality audio content with three difficulty levels aligned with the 2013 curriculum basic competencies.

RECOMMENDATIONS

Future research is recommended to develop the "Kupeng" platform with more sophisticated features such as automated assessment systems and student progress tracking to facilitate more comprehensive learning evaluation. The development of audio content with diverse English accent variations should be considered to enhance students' listening abilities in confronting different pronunciation variations. Implementation of artificial intelligence technology to provide real-time feedback to students could become a focus for subsequent research to improve independent learning effectiveness. Comparative research between listening instruction using "Kupeng" media and conventional methods needs to be conducted to measure the significance of learning outcome improvements quantitatively. Platform adaptation for different educational levels such as elementary or senior high schools could become an interesting research area to explore. Integration of collaborative features such as online discussions and peer assessment can be developed to support social learning within digital learning environment contexts.

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