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Project-Based Learning Podcast as Pedagogical Design: A Case Study of Student Speaking Learning

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Abstract

Speaking Learning In Higher Education Is Often Trapped In Final-Product Assessments And Minimal Contextual Exercises, Resulting In An Imbalance In Fluency, Diction And Accuracy, Organization Of Ideas, And Audience Sensitivity. The Purpose Of This Study Is To Describe A Project-Based Learning Podcast Model As A Pedagogical Design To Strengthen Authentic, Reflective, And Digitally Relevant Speaking Skills. This Study Used A Mixed Methods Approach With A Case Study Design. This Research Was Conducted At The Indonesian Language And Literature Education Study Program, Muria Kudus University. The Results Showed That Project-Based Podcasts, Using Editable Pretest-Posttest Data From 32 Students, Showed An Increase In The Average Speaking Score From 67.96 To 79.83, A Statistically Significant Increase. The Qualitative Section Utilized Observation Notes, Student Reflections, And Short Interview Excerpts That Demonstrated Improvements In Confidence, Fluency, Audience Awareness, And Revision Discipline, While Also Highlighting Challenges In Vocal Performance, Time Management, And Audio Editing. The Findings Suggest That Project-Based Podcasts Hold Pedagogical Promise Because They Expand Speaking Practice From One-Off Classroom Performances To Repeated, Audience-Oriented, And Documented Oral Productions. The implication is that Project-Based Learning podcasts are worthy of being positioned as an innovative pedagogical design for speaking instruction in higher education because they can present authentic, collaborative, and student-centered language practices.

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INTRODUCTION

Speaking is the most tangible language skill in reflecting the quality of one's language mastery. Through speaking activities, individuals not only convey ideas but also negotiate meanings, build social relationships, and display their identity in public spaces. At the university level, speaking learning no longer focuses solely on the courage to appear or the accuracy of language structure; it needs to be developed towards mastery of academic, public, and digital communication competencies. In this context, students are required to produce speech that is coherent, thoughtful, substantively accountable, and relevant to a wider audience beyond the classroom. These skills include content accuracy, coherence of ideas, the ability to adjust speech to the interlocutor, mastery of various languages, strategies to clarify intentions, and sensitivity to social and cultural contexts (Tarigan, 2008; Hymes, 1972; Canale & Swain, 1980). Therefore, speaking and learning should ideally be directed toward the development of communicative competence as a whole, not just routine, mechanical presentation training.

In this context, *Project-Based Learning* (PjBL) is a relevant approach for developing students' speaking skills. PjBL allows students to collaborate on a real project, where they not only work in groups but also present their work to a wider audience. This approach facilitates students' practice in producing speech that is clear, systematic, and in accordance with the existing social context. In addition, PjBL requires students to think critically, formulate logical arguments, and communicate project results persuasively and effectively. Involvement in this project also helps them hone their public speaking skills, communicate with various parties, and adapt their speech to different audiences, both in academic, social, and professional contexts.

However, the practice of speaking and learning in universities, especially in the Indonesian Language and Literature Education study program, still faces various problems. Students are often able to express ideas well in writing, but are not yet fully skilled at transforming them into spoken speech that is vibrant, lively, and in accordance with the needs of the audience. Some of the weaknesses often found include inappropriate diction, an unsystematic explanation structure, unstable articulation, a speech rhythm that is too fast or too slow, and low confidence when speaking in public. In addition, speaking skill assessment tends to focus on final performance, while process aspects such as speech design, practice, revision, and reflection have not received adequate attention. In fact, these processes play an

important role in shaping students' oral performance in a more in-depth and sustainable manner (Nurgiyantoro, 2014; Subhayni, Sa'adiah, & Armia, 2017).

This article develops a pedagogical design, or learning model, for speaking in higher education that is relevant to the ecological development of student communication. Students now communicate not only in the classroom, but also in the digital space, which demands more flexible, concise, persuasive, and documented speaking skills. Media such as podcasts, short videos, live broadcasts, and other forms of digital audio production have made spoken speech an integral part of daily communication culture. In this context, learning to speak is not just a combination of media and methods; it must be designed as a learning model that can respond to these changes.

This change in the ecology of communication, on the one hand, provides new opportunities for learning Indonesian, but on the other hand, presents challenges, leaving language classes behind as communication practices develop in society. Therefore, speaking-learning needs to be developed by departing from a communication medium familiar to students, as is often found in the digital space, while remaining guided by clear pedagogical principles. Thus, this article aims to develop a speaking-learning model that integrates digital technology into a structured pedagogical framework, enabling students to master speaking skills relevant to contemporary communication needs.

Several recent studies show that podcasts have great potential to support the development of oral skills. Chaves-Yuste and de la Peña (2023) show that creating and using podcasts improve speaking and listening skills. Acevedo de la Peña and Cassany (2024) emphasized that student-produced podcasts provide an authentic context for speaking practice while activating reading and writing skills through the script planning process. Perry (2024) even shows that podcasts can be positioned as a form of academic speaking assessment that increases student motivation. In the Indonesian context, Suriani, Chandra, Sukma, and Habibi (2021), Wahyuni and Pulungan (2025), and Romadona, Harahap, and Rahmawati (2025) also show that podcast use correlates with increased speaking skills, motivation, and participation in learning.

On the other hand, Project-Based Learning (PjBL) has long been seen as a model capable of providing authentic, collaborative, and product-oriented task contexts. Within this framework, learning does not stop at understanding the material. However, it moves towards completing

projects that require problem exploration, decision-making, teamwork, communication, and the presentation of results. Research by Dias-Oliveira, Pasion, Vieira da Cunha, and Lima Coelho (2024) shows that PjBL can develop communication, critical thinking, and cooperation skills. Research by Firdaus and Rozy (2025) and Arianti and Ratnawati (2024) on language learning in Indonesia also shows that PjBL improves students' speaking skills and confidence.

This research offers novelty in the use of podcasts as a learning medium based on Project-Based Learning (PjBL), where podcasts are not only used as learning aids but also designed as final products that integrate students' authentic speaking into the learning process. In contrast to previous research, such as that conducted by Suriani et al. or Wahyuni & Pulungan, which focused more on the use of podcasts as a means or medium of material delivery, this study emphasizes pedagogical **design** that utilizes podcasts as part of a *project* that involves students in the planning, production, and evaluation stages. The research also incorporates **aspects of student self-reflection and metacognition** into the podcast production process, thereby contributing to a deeper understanding of speaking skills development through a holistic, authentic, project-based approach.

The main problem is that podcasts are often treated only as a communication medium, while Project-Based Learning (PjBL) is positioned as a common instructional practice. The two are rarely combined into a pedagogical model specifically designed to measurably and authentically develop Indonesian speaking skills. Although podcasts are discussed as a rapidly evolving digital communication phenomenon in the introduction, it is important to emphasize that this article focuses not on the technology itself but on the development of learning designs that utilize podcasts and PjBL within a pedagogical model. This learning design aims to create a learning experience that allows students to develop speaking skills in a more relevant, authentic, and measurable way, in accordance with the demands of today's digital communication.

STUDY METHOD

This study uses a **Convergent Parallel (Triangulation) type Mixed Methods** approach with a case study design. This approach was chosen because the research aims to simultaneously understand two main dimensions: the process of implementing project-based podcasts in speaking instruction and their impact on students' speaking performance. In this design, quantitative data and

qualitative data are collected in relatively the same period during the learning process. Quantitative data is used to show the tendency of changes in students' speaking ability. In contrast, qualitative data is used to explain the dynamics of the process, response, involvement, and pedagogical meaning that emerge during implementation. The two types of data were analyzed separately according to their respective characteristics, then integrated at the interpretation stage to gain a more complete, mutually reinforcing, and in-depth understanding of the effectiveness of project-based podcast implementation. The case study design was used because the research focused on a single case, namely the practice of speaking instruction for students of the Indonesian Language and Literature Education Study Program in the real context of university lectures.

Case Studies are used to understand in-depth pedagogical practices in real contexts, e.g., learning speaking skills in college. Quantitative data were used to reinforce the picture of changes in students' speaking skills during the implementation of a podcast-based project. Meanwhile, qualitative data were used to explore in depth the dynamics of learning, student responses, their involvement, and the pedagogical meaning of the project's implementation.

The research was conducted with students in the Indonesian Language and Literature Education Study Program who took the Speaking Skills Course in the Even Semester of the 2025/2026 Academic Year. This research focuses on a single class or learning implementation as a context-limited case unit. The research subjects were 32 students selected purposively, who participated in a series of lectures on podcast projects covering the planning, production, and publication stages of results. In this study, the course lecturer served as the learning designer. At the same time, the researcher acted as an observer and data analyst to ensure the accuracy of the data collection and interpretation. To strengthen the reliability of the speech performance assessment, a bias control mechanism is implemented by involving two independent assessors in the evaluation process. The first assessor is a lecturer with a deep understanding of the learning material, while the second assessor is a researcher who is not directly involved in its design. These two assessors conducted the assessment separately, and the results were compared to assess consistency. In the event of a significant difference in assessment, a discussion is held between the lecturer and the researcher to reach an objective agreement. This mechanism is expected to minimize biases arising from lecturers' proximity to the learning process and to increase

the validity of assessments of students' speaking performance. The object of this research is the implementation of project-based podcasts as a pedagogical design in student speaking learning. The focus of the research is directed to four main aspects, namely: (1) podcast-based learning planning, (2) the process of implementing podcast projects in speaking classes, (3) student responses and involvement during learning, and (4) changes in students' speaking ability as seen through linguistic and non-linguistic indicators. The indicators of speaking ability observed include fluency, pronunciation accuracy, diction accuracy, content coherence, boldness of performance, and the ability to adapt speech to the audience and communication goals.

The research procedure is carried out in several stages. In the initial stage, the researcher analyzes speaking-learning needs and prepares a podcast project design integrated into the semester learning plan. Furthermore, students are divided into small groups and tasked with designing educational podcasts on linguistic, literary, cultural, or social phenomena relevant to student life. In the production stage, students draft scripts, do speaking exercises, record podcast episodes, edit recordings, and present the final product. During the process, lecturers provide mentoring, formative feedback, and periodic reflections. In the final stage, the researcher evaluated the project's results and documented changes in students' speaking performance.

The research data consists of quantitative data and qualitative data. Quantitative data were obtained from pretest and posttest scores on speaking skills, performance scores on podcast projects, and student response questionnaires on the application of learning. The pretest and posttest were conducted to see changes in students' speaking skills before and after the implementation of the podcast project-based pedagogical design. The assessment of speaking ability uses analytical rubrics with a 1-5 score range for each aspect: fluency, pronunciation, word choice, speech structure, idea development, and communicative expression. Meanwhile, the student response questionnaire used a Likert scale of 1–5 to measure perceptions of the meaning of learning, ease of collaboration, increased confidence, and the benefits of podcasts in practicing speaking skills.

The qualitative data were obtained through participatory observation, semi-structured interviews, field notes, student reflections, and podcast product documentation. Observations were made during the lecture to record the dynamics of class interaction, student involvement, patterns of group cooperation, and the strategies

students used in composing and delivering oral speeches. Interviews were conducted with several students who were selected to representatively reflect, based on participation and performance, as well as with the lecturers who taught the course. Field notes and student reflections capture learning experiences, barriers, adaptation strategies, and pedagogical meanings that emerge during project implementation.

The research instruments used include: (1) observation sheets for speaking learning activities, (2) rubrics for assessing speaking skills, (3) student response questionnaires, (4) interview guidelines, and (5) documentation formats for the implementation of podcast projects. To ensure data validity, the research employed triangulation techniques, including **source triangulation**. Technical triangulation was carried out by comparing data from observations, interviews, questionnaires, and documentation. In contrast, source triangulation was carried out by comparing information from students and lecturers with the podcast products' results.

In terms of **instrument validity**, the speaking skills assessment rubric and the student response questionnaire have undergone content validation to ensure alignment with the research objectives and the measurement's objectivity. **The speaking skill assessment rubric** used to assess students' speaking ability is prepared using **clear, detailed criteria** for each aspect observed, such as fluency, pronunciation accuracy, diction accuracy, content coherence, boldness of performance, and the ability to adapt speech to the audience and communication goals. **The rubric's content validity is established in consultation with language learning and learning evaluation experts**, who provide feedback to ensure that the rubric measures all relevant aspects of speaking skills and is appropriate to the learning objectives.

As for the **student response questionnaire**, which measures student perceptions of podcast-based learning, validity was established **through a construct validity test**. The constructs measured in the questionnaire included perceptions of the meaning of learning, ease of collaboration, increased confidence, and the benefits of podcasts in practicing speaking skills. Before being used in the study, the questionnaire was tested on a small group of students to ensure its reliability and validity, with attention to whether each item accurately reflected the construct.

In addition, to ensure the **objectivity of the measurement, the reliability** of the two instruments, both the speaking assessment rubric and the response questionnaire, was tested using **the test-retest method or inter-rater reliability**,

in which two or more raters assessed the same sample. The reliability test results showed consistency in the assessment between the assessors, further strengthening the objectivity of quantitative data measurement.

Quantitative data analysis was carried out descriptively by calculating the average score, percentage, minimum–maximum score, and increase in pretest–posttest scores. When needed, this analysis can be reinforced through simple statistical tests, such as paired t-tests, to see the significance of changes in scores before and after treatment. Meanwhile, qualitative data is analyzed through the stages of data reduction, data presentation, and conclusion drawing. Data from observations, interviews, student reflections, and documentation are encoded into key themes, including student engagement, confidence, collaboration, verbal creativity, technical barriers, and the pedagogical value of podcasts as project media. In accordance with the **Convergent Parallel (Triangulation)** design, the results of quantitative and qualitative analysis are then integrated in the final stage for comparison, confirmation, and interpretation, to obtain a comprehensive picture of the process and outcomes of project-based podcast implementation in speaking learning.

LANDASAN TEORETIS

Speaking Skills as a Multidimensional Competency

Conceptually, speaking skills should be understood as multidimensional competencies. Tarigan (2008) views speaking as a productive skill closely related to listening. This means that the ability to speak does not appear in isolation; it is built through the processes of receiving, processing, and producing language. In the context of learning Bahasa Indonesia, this understanding is important because effective speaking practices will not develop if students lack exposure to high-quality speech models, opportunities to observe discourse structures, and reflective exercises on their own language use.

Hymes (1972) and Canale and Swain (1980) expand this understanding through the concept of communicative competence. Effective speaking is not only determined by grammatical accuracy, but also by the ability to choose a variety of languages, understand interaction norms, compose cohesive discourses, and use strategies when communication disorders occur. Thus, Indonesian Language Education students should ideally not only speak fluently but also consider the audience, the purpose of the speech, the structure of the explanation, and strategies to ensure the message is clearly conveyed.

In the university environment, the complexity of speaking is increasing because students are often asked to give scientific presentations, moderate discussions, deliver speeches, write book reviews, and produce educational content. Each form has different discourse demands. Scientific presentations, for example, demand argumentation and coherence; discussions demand responsiveness and listening. Meanwhile, educational content requires information density, clarity, and attractiveness of presentation. Therefore, learning to speak is not enough if you only rely on one type of task. A design that accommodates the diversity of speech forms and is oriented to a real audience is needed.

From an assessment perspective, Nurgiyantoro (2014; 2018) emphasizes the importance of authentic assessments that view language skills as meaningful performance. In learning to speak, what is judged is not just the truth, but the quality of language use in certain communication situations. This principle is relevant because podcast production requires students to speak in their entirety: they must define a topic, structure a plot, choose words, set intonation, and consider the audience's listening experience. In other words, podcasts provide an appropriate forum for assessing speaking skills as a real communicative practice.

The theoretical implication of this understanding is the importance of designing speaking and learning that focus not only on the mastery of language techniques but also on students' ability to communicate effectively in a variety of contexts. Learning designs that integrate various forms of speech, such as presentation, discussion, and production of educational content, with an authentic assessment approach can create a more holistic learning experience. This also ensures that students not only master the theory but also can communicate effectively in real-world situations, as reflected in the podcast products they produce. The pedagogical model developed should pay attention to these principles to facilitate the development of speaking skills in a more measured and authentic manner.

Podcasts as a Digital Spoken Medium

Podcasts are essentially digital audio broadcasts that can be produced, shared, and listened to flexibly. Its main advantages lie in its accessibility, mobility, and on-demand nature. Unlike traditional speaking tasks that end when the performance is over, podcasts allow speech to be recorded, replayed, reviewed, and disseminated. This character is pedagogically important because it provides students with space to prepare, revise

their performance, and assess their speech results more consciously. Chan-Olmsted and Wang (2022) show that podcasts exhibit typical consumption characteristics, namely alignment with information needs, daily routines, and personal audio experiences.

In language education, podcasts can serve a dual purpose: as a source of input and as an output product. As input, podcasts present a speech model rich in intonation, pauses, emphasis, word choice, and discourse organization. As an output, podcasts encourage students to produce speech that is designed for the audience to understand. Rosell-Aguilar (2007) has since shown that podcasts offer flexible and independent language-learning opportunities. Chaves-Yuste and de-la Peña (2023) then reinforced the findings with evidence that the creation and use of podcasts can improve oral skills, especially speaking and listening.

The benefits of podcasts become even greater when students not only listen to them but also produce them themselves. Acevedo de la Peña and Cassany (2024) found that student-produced podcasts provide an authentic context for practicing speaking while also activating writing scripts, reading sources, and editing content. This means that a single podcast project can integrate multiple language skills at once. Perry (2024) also shows that podcasts can be used as a form of academic speaking assessment that students perceive as more meaningful because they resemble real-world communication practices and allow for creativity.

In Indonesia, the relevance of podcasts as a learning medium is increasingly evident, especially in supporting the practice of academic speaking. Suriani et al. (2021) show that podcast use is associated with improved speaking skills among elementary school students, with greater emphasis on their development in an academic context. Wahyuni and Pulungan (2025) emphasized that podcast media can improve junior high school students' speaking skills by focusing on the structured, clear aspects of speaking, which are important elements of academic communication. Romadona et al. (2025) found a significant effect of podcasts on students' speaking skills, especially in delivering arguments coherently and maintaining focus in conversation, which is particularly relevant in academic contexts. These results show that podcasts are not just a digital media trend but a medium with pedagogical potential across levels, especially in academic speaking. The challenge is to use it not sporadically, but rather through a systematic, planned learning design to support more structured, measurable academic speaking skills.

Project-Based Learning and Authentic Discourse Production

Project-Based Learning places learning as the process of completing meaningful tasks that produce real products. Thomas (2000) asserts that a good project departs from a question, problem, or challenge that demands investigation. Bell (2010) then emphasized that PjBL aligns with 21st-century competencies because it develops collaboration, creativity, problem-solving, and communication. In the context of speaking learning, the advantage of PjBL lies in its ability to move language practice from a simulated space into the production of discourse with a social function. More than just improving general skills such as collaboration, PjBL specifically facilitates the production process of speech that is oriented to the audience and the context of real communication. Through projects involving external audiences or authentic communication situations, students not only practice speaking but also learn to construct speech that is relevant, effective, and aligned with clear communication goals in real-life social contexts.

When students are asked to create project-based podcasts, they are not just working on media assignments. They are actually entering a series of discourse processes: selecting issues, collecting data, selecting viewpoints, drafting scripts or frameworks, discussing role breakdowns, practicing, recording, editing, and publishing results. The whole series requires intensive language negotiations. Therefore, PjBL provides a strong space for the development of speaking skills that cannot be achieved through spontaneous practice alone.

Recent findings support that argument. Dias-Oliveira et al. (2024) show that the PjBL approach contributes to the development of communication and teamwork skills. García-Llamas et al. (2025) also found that PjBL is effective in fostering personal, professional, academic, and social competencies in higher education. In the context of language learning in Indonesia, Arianti and Ratnawati (2024) reported improvements in speaking skills through PjBL with news text materials, while Firdaus and Rozy (2025) showed that Vlog-assisted PjBL can improve students' speaking skills and confidence.

From a theoretical perspective, PjBL aligns with Vygotsky's (1978) sociocultural theory. Learning to speak does not occur in isolation but is shaped by interaction, scaffolding, and collaborative work. In the podcast project, students help each other craft arguments, improve speech, and test the clarity of messages before the product is published. It is this collaborative process that gives project-based podcasts greater pedagogical

potential than monologue tasks done in isolation. Thus, the integration of podcasts and PjBL is not a technical merger, but rather a meeting of two approaches that equally emphasize authentic communication, collaboration, and reflection.

Project-Based Podcast Pedagogical Design Planning Principles

The project-based podcast model in learning to speak Indonesian rests on five main principles—first, the authenticity of speech. The task is to produce a product worthy of hearing from others, not just to fulfill the class's administrative obligations. When students learn that their podcast will be published, shared with peers, or listened to by a particular community, the quality of attention to content, language, and presentation tends to increase.

Second, the integration of language skills. Good podcast production never relies solely on talking. Students need to read sources, listen to other podcast models, discuss concepts, write an outline or script, and then turn them into communicative spoken speech. Thus, the podcast project encourages a reciprocal relationship between receptive skills and productive skills. This principle is very important in learning Indonesian because it helps students see that speaking skills grow from a literacy ecosystem that supports each other.

Third, structured collaboration. PjBL often fails when group work is divided only by who is diligent and who is passive. Therefore, podcast projects need to be accompanied by a clear division of roles, such as topic researcher, scriptwriter, language editor, broadcaster, audio editor, and publication manager. The division of roles is not intended to separate abilities, but rather to ensure that each student is engaged and still has the

opportunity to speak. Good collaboration encourages scaffolding, exchange of ideas, and shared responsibility for the quality of speech.

Fourth, gradual feedback. In learning to speak, revision is very important but often overlooked. Podcasts give you an advantage because performance can be rehearsed. Therefore, the learning design should include several feedback points: at the topic selection stage, outline preparation, sound exercises, the initial recording, and the final version. Feedback from lecturers, peers, and self-reflection helps students identify weaknesses in articulation, coherence, diction, and pitch accuracy.

Fifth, an authentic assessment that assesses processes as well as products. The quality of the podcast is reflected not only in the neat-sounding voice but also in the depth of the content, the use of appropriate Indonesian, the ability to adapt to the audience, and the involvement of students throughout the project. This principle is what distinguishes project-based podcasts from regular recording tasks. The final product is important, but the quality of learning lies in how students arrive at the product.

Relationship of Objectives, Media, and Activities

If mapped pedagogically, the relationship between the learning objectives of speaking, the character of the podcast medium, and the form of project activities can be formulated as shown in Table 1. This table shows that each dimension of speaking skills requires a specific choice of activities. As such, podcast use should not be generic. Lecturers need to ensure that the assignment format is really aligned with the skills they want to strengthen.

Table 1. Speaking Dimension Relationships, Podcast Features, and Project Activities

Skill Dimension	Pedagogical Needs	Podcast Features	Form of Activity
Content and depth of ideas	Students need to read, select data, and build relevant viewpoints.	Episodes demand focused topics and accountable information.	Source review, topic discussion, outline preparation, and fact verification.
Discourse coherence	Speech should have a clear opening, development, transition, and closing.	The episode format helps students think about the speech flow thoroughly.	Compiling segment structures, making cue cards, and transitioning exercises between the sections.
Language accuracy	Diction, effective sentences, and language variety should be appropriate for the audience.	Recordings can be played back, so language weaknesses are easily recognizable.	Language revision workshops, manuscript checks, and paraphrasing written sentences into oral form.

Articulation, intonation, and fluency	Students need repetitive verbal performance exercises.	Audio recordings capture sound quality in detail and allow for gradual improvement.	Voice training, micro-rehearsal, pre-recording, performance reflection.
Audience awareness	Speakers should consider the listener's needs, interests, and knowledge.	Podcasts are oriented toward the experience of listening, informed by real listeners.	Determining the target audience, choosing a speech style, and testing the comprehension of the content.
Collaboration and digital literacy	Oral production in the digital age demands teamwork and media management.	Podcasts provide a diverse yet interconnected role space.	Role breakdown, basic editing, publication, and audience feedback.

Results and Discussion

The results of the research are presented in five subsections, namely pedagogical design, changes in speech performance, field implementation, student perception, and implementation constraints. This separation is intended to show that the effectiveness of a project-based podcast is not born of the medium alone, but of the relationship among design, process, assessment, and reflection.

Project-Based Podcast Pedagogical Design

The pedagogical design of the project starts from the assumption that speaking skills develop better when students have a clear reason to speak, enough room to revise, and a product that can be accounted for. On that basis, podcasts are used as a center for learning activities, not complements. Each group was asked to produce an episode that combined content accuracy, vocal clarity, and comprehension for the student audience.

The onboarding phase is used to set expectations. Lecturers played several examples of educational podcasts, discussing the characteristics of an interesting opening, the development of ideas, the use of communicative language, and the importance of articulation and tempo. In this phase, the lecturer also emphasized that the goal of the project is not to create technically perfect audio but to build a speaking performance that is more audience-aware and more ready to revise.

The project design phase is geared towards topic narrowing, audience identification, and outline creation. Students are asked to avoid themes that are too abstract and to choose concrete issues, such as the ethics of speaking in digital spaces, the phenomenon of code-mixing on campus, the culture of student discussions, or challenges of oral literacy among younger generations. Selecting themes close to their experience helps the process of exploring ideas and enriching the content data.

In the production phase, lecturers pay equal attention to content and performance. Students write the initial script, read aloud, receive peer

feedback, and then record the first draft. After listening to the recording, they identify parts that are too fast, monotonous, repetitive, or less clear. Thus, the recording is not an end product, but rather a reflection tool that encourages gradual improvement.

The publication and reflection phase is an important conclusion. When a podcast is played in class or uploaded to an internal sharing channel, students feel that their speech has a real audience. This shift in their motivation moves them from simply 'completing tasks' to 'making a message worth hearing'. After that, lecturers held posttests, evaluative discussions, and individual reflections to capture changes in students' perceptions of speaking learning.

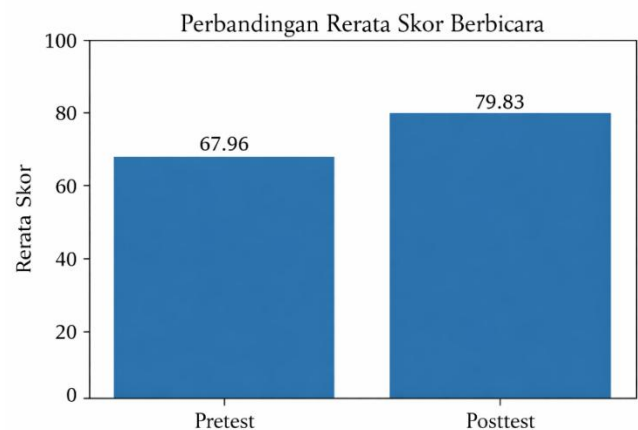


Figure 2. Comparison of the average pretest and posttest speaking scores on implementation data.

Changes in Student Speaking Performance

Quantitative data showed a great improvement in speaking performance after students participated in the project. The increase was observed in both the average total score and almost all aspects of the assessment. The paired t-test on the editable data compiled for this article showed a significant difference between the pretest and posttest, suggesting that a podcast project based on pedagogical design has the potential to strengthen the quality of students' oral performance.

Table 2. Comparison of pretest and posttest speaking scores

Aspek	Pretest	Posttest	Gain
Articulation	68.4	80.2	11.8
Smoothness	66.7	79.4	12.7
Diction	68.1	79.8	11.7
Content Coherence	67.5	80.4	12.9
Vocal Expression	68.9	81.3	12.4
Audience Awareness	68.0	77.9	9.9
Rerata total	67.96 (SD 5.17)	79.83 (SD 6.78)	11.87
Different tests		t(31) = 16.88	p < 0.001

When detailed, the biggest improvements are seen in content coherence, fluency, and vocal

expression. These findings hint that podcast projects not only train mechanical aspects such as pronunciation, but also the ability to structure the flow of ideas and bring the sound to life. The aspect of audience awareness also increased, although the gain was slightly lower than in other aspects. This is natural because the orientation toward the listener usually develops gradually as students start thinking about the publication and others' responses to their product.

Implementation Data in the Field

One important need in writing a learning article is to present clear evidence of implementation. Therefore, this article summarizes the field data in a single table that combines quantitative and qualitative information. This format makes it easier for readers to see how changes in numbers relate to the dynamics of classroom processes.

Table 3. Implementation data in the field: integration of quantitative and qualitative data

Stages	Focus of Activities	Quantitative Data	Qualitative Data
Week 1	Project onboarding, speaking problem mapping, and pretest	Attendance 32/32 (100%); pretest average 67.96; 78.1% of students say they have never made an educational podcast	Students are enthusiastic about podcast examples, but some still envision speaking assignments as regular presentations. Observation notes indicate that many students read the notes during the pretest but are unable to maintain a steady tempo.
Week 2	Determination of topics, episode objectives, and audience profiles	8 groups are formed; 100% of the groups submitted a topic; 62.5% of the topics related to campus issues and literacy culture	The discussion of the topic sparked intense negotiations. Some groups initially chose the topic too broadly, then narrowed it after the lecturer asked them to focus on issues close to the student experience.
Week 3	Material collection, outline compilation, and initial manuscript writing	The average outline completeness is 81.4%; 6 out of 8 groups submitted the initial manuscript on time	At this stage, students begin to understand the importance of researching content before speaking. A common problem is that the manuscript is too similar to written text and does not sound natural when read aloud.
Week 4	Vocal exercises, opening simulations, and peer feedback	The average score of formative training was 73.25; 84.4% of students actively give feedback to their peers	Students begin to realize that articulation and word emphasis affect how well they are heard. A lot of peer feedback highlights overly high speech speeds and unclear pauses between ideas.
Week 5	Recording of the first episode and lecturer consultation	87.5% of the group managed to record the first draft; Average episode	Performative pressure was strongly evident in the initial recording. Some students seem more nervous when recorded than when speaking in class, but

		duration 8 minutes 14 seconds	the re-recording helps them lower the tension and correct the less obvious parts.
Week 6	Audio editing, opening music insertion, and script revision	75% of the group can edit independently; 25% still need technical assistance; Average content revision 2.6 times per group	The most obvious technical obstacles arise at the editing stage. However, it is precisely at this stage that students make the most diction improvements, sentence compaction, and the elimination of long- winded parts.
Week 7	Publication of results and presentation of production processes	100% of the group publishes products on class channels; Average product score 80.94	Once the product is published, the student's orientation to the audience increases. They began to pay closer attention to opening, transitioning, and closing because they knew other groups would hear the results.
Week 8	Posttest, individual reflection, and project evaluation	Posttest average 79.83; gains, 11.87; 90.6% of students rated projects as helping with fluency	The final reflection shows a change in perspective: students no longer view speaking as a momentary task, but rather as a process that requires design and refinement. Some students still complain about the production time, but the majority think this project adds confidence.

Table 3 shows two main trends. First, student participation was relatively high at all stages, indicating strong bonding within the project. Second, the constraints are most apparent at the stage that requires in-depth revision, especially when students have to convert written text into natural spoken speech or edit audio. In other words, the greatest learning load does not appear when speaking in front of the class, but when building the quality of speech repeatedly.

Students' Perceptions of the Learning Experience

The students' response to this project tends to be positive. The questionnaire showed that most students reported increased confidence, fluency, and audience awareness. However, the data also shows that editing remains the most challenging stage. These findings are important because they show that pedagogical design reinforcement needs to include technical support, not just language support.

Table 4. Summary of student responses to podcast projects

Statement	Percentage of Agree/ Strongly Agree
Podcast projects help me be more confident when speaking.	87,5%
Re-recording exercises make me smoother and	90,6%

more aware of my own
mistakes.

Group work helps me
enrich ideas and clarify
the flow of the
conversation. 84,4%

Podcast publications
make me think more
about the audience's
needs. 81,3%

The audio editing stage
was difficult at the
beginning of the project. 71,9%

I want a similar
assignment model to be
used again in other
speaking courses. 85,9%

The students' reflective quotes reinforced the questionnaire findings. A student who coded P-07 stated that listening back to the recording helped him recognize parts of speech that were spoken too quickly. P-13 emphasized that the project made him realize that the courage to perform is not enough without structuring the content and language. P-21 highlights the benefits of editing as a space for speech compaction, while P-29 links product publication to the group's increasing seriousness in managing speech. The quote shows that the main benefit of the project lies precisely in the metacognitive awareness that grows during the production process.

P-07: "Saya baru sadar kalau berbicara yang enak didengar itu harus dipikirkan dari awal. Waktu mendengar rekaman sendiri, saya tahu bagian mana yang terlalu cepat dan mana yang masih kaku."

P-13: "Sebelumnya saya sering merasa cukup kalau sudah berani tampil. Di proyek ini ternyata berani saja tidak cukup, karena kami harus menata isi dan menyesuaikan bahasa supaya pendengar tidak bosan."

P-21: "Bagian editing memang melelahkan, tetapi justru dari situ kami belajar memilih kata yang lebih hemat dan tidak berulang-ulang."

P-29: "Ketika podcast diputar di kelas, rasanya berbeda. Kami jadi lebih serius karena tahu yang dinilai bukan hanya isi, tetapi juga bagaimana kami membawakan topik itu."

P-07: "I just realized that speaking that is pleasing to the ears must be thought about from the beginning. When I heard the footage myself, I knew which parts were too fast and which were still stiff."

P-13: "Before, I often felt that it was enough if I dared to perform. In this project, it turns out that being brave is not enough, because we have to arrange the content and adjust the language so that the listener does not get bored."

P-21: "The editing part is tiring, but that is where we learned to choose words that are more economical and not repetitive."

P-29: "When podcasts are played in class, it feels different. We became more serious because we knew what was judged was not only the content, but also how we presented the topic."

Implementation Constraints and Improvement Strategies

Although the implementation results show a positive trend, some obstacles arise consistently. These constraints are mainly related to differences between written and spoken language, performative anxiety during recording, technical editing skills, and time coordination in group work. Therefore, pedagogical design needs to be accompanied by a clear mitigation strategy as summarized in the following table.

Table 5. Implementation Constraints and Improvement Strategies

Constraints	Indications in the Field	Improvement Strategy
Too written script	Students write like essays, not spoken words	The lecturer gives examples of conversational scripts and asks for a

		reading aloud before finalizing
Nervous during recording	Some students lose their smoothness when the microphone is turned on	Applied short vocal exercises, experimental recordings, and repetitive take schemes
Limited editing skills	Some groups are not familiar with audio software	Short tutorials, project templates, and technical consultation are provided
Time management	Revisions and synchronization of group schedules often pile up towards deadlines	Tasks are broken down into weekly milestones with progress checks

Overall, these constraints do not weaken the pedagogical value of the project, but rather indicate areas that need to be anticipated when lecturers replicate this design. A good task is not a barrier-free task, but one whose obstacles can be turned into learning opportunities. In the podcast project, the difficulty of editing and re-recording is actually an important space for students to rethink the quality of their speaking.

Discussion

The increase in speaking scores in this study can be attributed to greater exercise intensity, revision cycles, and a shift in speaking orientation from classwork to public communication. In regular learning, students often speak once and then finish. On the other hand, in a podcast project, students have to prepare a script, practice, rehearse, re-record, and consider the message's comprehension. This series of activities increases opportunities to improve pronunciation, intonation, word choice, and idea structure. These findings align with Díez and Richters (2020), who show that podcasting can expand oral production while supporting pronunciation evaluation, and corroborate Farangi et al. (2015), who found that podcast use has a positive effect on EFL learners' speaking skills. Thus, this study confirms that improvements in speaking skills do not come solely from the use of digital media, but especially from the repetitive, measurable, and reflective process of oral production.

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From a pedagogical design perspective, these results confirm that podcasts are most effective when embedded as a core learning component within the Project-Based Learning framework. When podcasts are used only as an additional listening medium, their impact on speaking skills tends to be more limited. Conversely, when podcasts are at the core of the project with the stages of investigation, production, publication, and reflection, students gain a more complete and integrated learning experience. This argument is consistent with Abdous et al. (2012), who assert that their integration model largely determines the effectiveness of podcasts in learning, not solely their technology. These findings are also in line with Wakefield et al. (2023), who showed that learner-generated podcasts can serve as a meaningful and enjoyable form of authentic assessment, and with Almendingen et al. (2021), who found that student-produced podcasts encourage discussion, reflection, and collaboration. Thus, this study reinforces previous research while clarifying its new contribution: podcasts have the greatest pedagogical impact when they function as the core of learning activities, rather than as a complement to learning.

In the context of Indonesian Language and Literature Education, the podcast project has strategic significance because it expands the definition of speaking skills. Students are no longer judged solely by momentary fluency, but also by their ability to develop an academic voice, manage narratives, negotiate in group work, and produce speech fit for public consumption. The results of this study complement the findings of Hall and Jones (2023) and Wakefield et al. (2023), which

both place student podcasts as a means of developing more active, authentic, and contextual communication. The novelty of this article lies in the affirmation that, in learning to speak for prospective Indonesian teachers, podcasts are not only a technological tool but also a vehicle for the formation of academic-digital communication competencies relevant to today's profession.

While promising, project-based podcast implementation still requires certain pedagogical prerequisites. Lecturers need to provide product examples, clear rubrics, short training sessions, technical consultations, and gradual deadlines to prevent projects from piling up at the end. In addition, institutional support, including device access, simple recording rooms, and campus publication ecosystems, will be highly beneficial. In other words, the success of the project is not only the result of student creativity, but the fruit of a deliberately designed learning architecture.

An interesting finding in this study is that audience awareness continues to increase, but the gain is the lowest among the other aspects. Based on the data in Table 2 and Table 3, which show that **audience awareness** rose from **68.0** to **77.9**, a **gain of 9.9**, while the orientation towards new listeners appeared stronger after the publication stage in Week 7. This condition indicates that orientation to the listener does not develop as quickly as articulation, fluency, content coherence, or vocal expression. From a **psycholinguistic** point of view, this is understandable because audience consciousness demands more complex mental processes than simply producing fluent speech. Students not only have to access vocabulary, structure sentences, and maintain pronunciation, but also engage in perspective-taking, which involves imagining what the listener knows, needs, or may not understand. In the early stages of the project, most of the students' cognitive resources are still being used to cope with nervousness, maintain the tempo of speech, read the script reasonably, and control performance during recording. As a result, their attention is primarily focused on successfully producing "correct" and "fluent" speech, while the ability to adapt language to the needs of the audience develops more slowly.

From a sociolinguistic **point of view**, the low gain in this aspect also shows that students are not fully accustomed to viewing speaking as a social practice always tied to the counterpart and the communication context. Implementation data shows that at the beginning of the project, students still imagined the task of speaking as an ordinary presentation, not as a discourse production for real listeners. Orientation to new audiences seemed to strengthen when the product was published and

heard by other groups in Week 7. At this point, students begin to pay closer attention to the opening, transition, and closing because they realize their speech is no longer judged only by lecturers but also by real listeners. This means that **audience awareness is a pragmatic-social competence that grows through the experience of interacting with the listening community**, not just through technical speaking exercises. Thus, the lower gain in this aspect is an important finding: podcast projects are effective in improving verbal performance in general, but strengthening audience orientation requires longer exposures, wider publication opportunities, and exercises that explicitly require students to tailor their choice of language, style, and message organization to the listener's character. Thus, the low gain in audience awareness does not indicate a weakness in the learning design, but rather emphasizes that this competence is more social-pragmatic and develops more gradually than the technical aspect of speaking.

The practical implications of this article lie in three domains. First, in the realm of planning, lecturers can create podcasts as a form of authentic assessment directly linked to speaking-learning achievements. Second, in the realm of process, implementation documentation that combines numbers and narratives can be used as a model for implementing project-based learning. Third, in the realm of evaluation, speaking rubrics, student reflection, and self- and peer assessment can be combined to assess student performance and metacognitive development. These implications align with Wakefield et al. (2023) on podcasts as authentic assessments and with Cadena Aguilar and Alvarez Ayure (2021) on the importance of integrating reflection and *peer assessment* in the development of oral performance. In that way, speaking learning moves from a single-outcome orientation to a more comprehensive process assessment.

Conceptually, it also shows that good digital pedagogical design always puts technology in service of learning objectives, not the other way around. Podcasts are relevant not because they are popular, but because the character of this medium aligns with the needs of learning to speak: repetitive exercises, self-monitoring, message packaging, and audience orientation. If lecturers can organize these four elements into an authentic project, podcasts can be a powerful means to build students' speaking skills in greater depth.

CONCLUSION

Project-based podcasts can be understood as pedagogical designs that organize students'

speaking and learning into a more authentic, collaborative, reflective, and documented series. Through this project, speaking is not positioned as a momentary appearance, but as an oral production process that involves tracing materials, scriptwriting, rehearsals, revisions, publications, and evaluations. The draft implementation presented in this article shows strong potential to strengthen fluency, coherence, confidence, and audience awareness, as evidenced by increased speaking scores, high student participation, and the emergence of positive themes in reflections.

The article also emphasizes that the pedagogical value of podcasts does not lie solely in the technology, but rather in how lecturers design projects, break down work stages, give feedback, and connect products with reflections. For the Indonesian Language Education Study Program, this design is relevant because it encourages students to become speakers who are not only fluent but also context-aware, critical, and ready to communicate in digital public spaces. In the future, empirical research can expand this study by comparing classes, tracing the quality of student interactions, or testing the influence of podcast topic types on the development of speech performance.

Nevertheless, the model presented in this article has significant practical value for Indonesian Language Education lecturers. Lecturers can use it as a reference for preparing RPS, mid-semester projects, authentic assessments, or classroom action research. In particular, field implementation tables that combine numbers and narratives can be used as a robust reporting format because they show learning changes in a more vivid, measurable, and easily verifiable way.

Third, follow-up research should not only measure gain scores but also examine the quality of group interaction, the variety of topic types, manuscript revision strategies, and the relationship between editing complexity and the quality of speaking performance. Comparative research between classes or project models will also be very useful for showing which design elements have the greatest influence on students' speaking skills.

Second, although this article has combined quantitative and qualitative data in the field implementation section, the data are still presented in a compiled form that can be edited. Consequently, the main contribution of this paper lies in design models, reporting structures, and analytical logic, rather than in claims of empirical generalization. For the manuscript to be eligible for submission, the author must replace the score, percentage, student citations, and process

description with actual data from the research results.

This article has limitations that need to be noted. First, the discussion focuses on one implementation context, so the generalizability of the findings must be done carefully. The effectiveness of the design is likely to be influenced by students' character, classroom culture, lecturers' readiness, device availability, and the length of the project. Therefore, when this model is adapted to other contexts, adjustments to course objectives and institutional readiness are still necessary.

REFERENCES

- Abdous, M., Facer, B. R., & Yen, C.-J. (2012). *Academic effectiveness of podcasting: A comparative study of integrated versus supplemental use of podcasting in second language classes. Computers & Education*, 58(1), 43–52. doi: 10.1016/j.compedu.2011.08.021.
- Alimi, M. Y., & Yanto, W. (2013). Belum Ada Audul. *Komunitas*, 5(2), 100-115.
- Albayrak, E. (2004). Using Analytical Hierarchy Process (AHP) to Improve Human Performance: An Application of Multi-Criteria Decision Making Problem. *Journal of Intelligent Manufacturing*, 15:491-503.
- Almendingen, K. A. K., Torbjørnsen, A., Sparboe-Nilsen, B., Kvarme, L. G., & Benth, J. S. (2021). *Small-group student-produced podcasts were favored as an assignment tool for large-scale interprofessional learning: An exploratory study among health, social care, and teacher education programs. Frontiers in Education*, 6, 622716. doi: 10.3389/feduc.2021.622716.
- Ajami, S., & Ketabi, S. (2012). Performance Evaluation of Medical Records Departments by Analytical Hierarchy Process (AHP) Approach in the Selected Hospitals in Isfahan. *J Med Syst*, 36:1165–1171.
- Acevedo de la Peña, I., & Cassany, D. (2024). Student podcasting for foreign language teaching-learning at university. *Journal of Technology and Science Education*, 14(1), 123-141
- Arianti, A., & Ratnawati, I. I. (2024). Penerapan model pembelajaran Project Based Learning (PjBL) untuk meningkatkan keterampilan berbicara pada materi teks berita di kelas XI-A SMA Negeri 6 Balikpapan tahun ajaran 2023/2024. *Jurnal Basataka*, 7(1), 327-335. <https://doi.org/10.36277/basataka.v7i1.473>
- Asmarida, D. P., Harahap, E. P., & Priyanto, P. (2023). Podcast sebagai alternatif media pembelajaran studi terapan pada materi teks berita di kelas VIII A SMP Nasional Sariputra Kota Jambi. *Lintang Aksara*, 4(1), 41-49. <https://doi.org/10.22437/jla.v4i1.46426>
- Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The Clearing House*, 83(2), 39-43.
- Brame, C. J. (2016). Effective educational videos: Principles and guidelines for maximizing student learning from video content. *CBE-Life Sciences Education*, 15(4), es6.
- Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy* (2nd ed.). New York: Longman.
- Brown, H. D. (2004). *Language assessment: Principles and classroom practices*. New York: Pearson Education.
- Bustari, A., Samad, I. A., & Achmad, D. (2017). *The use of podcasts in improving students' speaking skill. JELE (Journal of English Language and Education)*, 3(2), 97–111. doi: 10.26486/jele.v3i2.256.
- Cadena Aguilar, A., & Alvarez Ayure, C. P. (2021). *Self-and peer-assessment of student-generated podcasts to improve comprehensibility in undergraduate EFL students. Profile: Issues in Teachers' Professional Development*, 23(2), 67–85. doi: 10.15446/profile.v23n2.88928.
- Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics*, 1(1), 1-47.
- Chan-Olmsted, S., & Wang, R. (2022). Understanding podcast users: Consumption motives and behaviors. *New Media & Society*, 24(3), 684-704. <https://doi.org/10.1177/1461444820963776>
- Chaves-Yuste, B., & de-la Peña, C. (2023). Podcasts' effects on the EFL classroom: A socially relevant intervention. *Smart Learning Environments*, 10, 20. <https://doi.org/10.1186/s40561-023-00241-1>
- Dias-Oliveira, E., Pasion, R., Vieira da Cunha, R., & Lima Coelho, S. (2024). The development of critical thinking, team working, and communication skills in a business school - A project-based learning approach. *Thinking Skills and Creativity*, 54, 101680. <https://doi.org/10.1016/j.tsc.2024.101680>.
- Díez, M. T., & Richters, M. A. (2020). *Podcasting as a tool to develop speaking skills in the foreign language classroom. The EUROCALL Review*, 28(1), 40–56. doi: 10.4995/eurocall.2020.13191.
- Farangi, M. R., Nejadghanbar, H., Askary, F., & Ghorbani, A. (2015). *The effects of podcasting on EFL upper-intermediate learners' speaking skills. CALL-EJ*, 16(2), 1–18.
- Fatihah, H., Waluyati, S. A., & Mariyani. (2023). Podcast sebagai media pembelajaran era digital di perguruan tinggi. *Bhineka Tunggal Ika: Kajian Teori dan Praktik Pendidikan PKn*, 10(1), 87-95. <https://doi.org/10.36706/jbti.v10i1.20441>
- Firdaus, M. N. A., & Rozy, F. (2025). Pengaruh model pembelajaran Project Based Learning berbantuan media vlog terhadap keterampilan berbicara peserta didik. *Stilistika: Jurnal Pendidikan Bahasa dan Sastra*, 18(2), 431-440. <https://doi.org/10.30651/st.v18i2.26524>
- García-Llamas, P., Taboada, A., Sanz-Chumillas, P., Lopes Pereira, L., & Baelo Álvarez, R. (2025). Breaking barriers in STEAM education: Analyzing competence acquisition through project-based learning in a European context. *International Journal of Educational Research Open*, 8, 100449. <https://doi.org/10.1016/j.ijedro.2025.100449>

- Hall, N. M., & Jones, J. M. (2023). *Student-produced podcasts as a teaching and learning tool*. *American Journal of Distance Education*, 37(1), 53–65. doi: 10.1080/08923647.2021.1995256.
- Hymes, D. (1972). On communicative competence. In J. B. Pride & J. Holmes (Eds.), *Sociolinguistics* (pp. 269–293). Harmondsworth: Penguin.
- Ilana, V. R., Hidayat, E., & Mardasari, O. R. (2021). Pengembangan media podcast untuk keterampilan menyimak mahasiswa Prodi Pendidikan Bahasa Mandarin Universitas Negeri Malang. *JoLLA: Journal of Language, Literature, and Arts*, 1(2), 151–161. <https://doi.org/10.17977/um064v1i22021p151-161>
- Kearney, M., Schuck, S., Burden, K., & Aubusson, P. (2012). Viewing mobile learning from a pedagogical perspective. *Research in Learning Technology*, 20, 14406.
- Laiya, R. E., Khasanah, U., Sulistiani, I., Sudrajat, D., & Miswan, M. (2022). Podcast-mediated students learning English in the second grade of senior high school. *QALAMUNA: Jurnal Pendidikan, Sosial, dan Agama*, 14(2), 1011–1024. <https://doi.org/10.37680/qalamuna.v14i2.3749>.
- Liu, T.-L., Yang, Y.-F., & Hong, Y.-C. (2021). *Raising students' audience awareness for oral presentation through online role-reversal*. *System*, 99, 102510. doi: 10.1016/j.system.2021.102510.
- Mayangsari, D., & Tiara, D. R. (2019). Podcast sebagai media pembelajaran di era milenial. *Jurnal Golden Age*, 3(2), 126–134. <https://doi.org/10.29408/goldenage.v3i02.1720>
- Mekheimer, M. A. (2025). Beyond the textbook: A year-long exploration of VODcasts in EFL education. *Education and Information Technologies*, 30, 4777–4793. <https://doi.org/10.1007/s10639-024-12900-y>
- Mohammed, F. G., & Khadawardi, H. A. (2024). Investigating EFL students' perspectives of the influence of podcasts on enhancing listening proficiency. *Journal of Education and Learning*, 13(3), 177–191. <https://doi.org/10.5539/jel.v13n3p177>
- Muliatik, S. (2025). Pengaruh media pembelajaran berbasis podcast terhadap keterampilan berbicara pada siswa MTs Islamiyah GUPPI. *Hibrul Ulama*, 7(1), 178–184. <https://doi.org/10.47662/hibrululama.v7i1.1050>
- Nurgiyantoro, B. (2014). *Penilaian pembelajaran bahasa berbasis kompetensi*. Yogyakarta: BPFE.
- Nurgiyantoro, B. (2018). *Penilaian otentik dalam pembelajaran bahasa*. Yogyakarta: UGM Press.
- Perry, S. (2024). Podcasting as a form of assessment: Increasing student motivation in academic English-speaking assessment. *Language Testing in Asia*, 14, 15. <https://doi.org/10.1186/s40468-024-00288-y>
- Phillips, B. (2017). *Student-produced podcasts in language learning: Exploring student perceptions of podcast activities*. *IAFOR Journal of Education*, 5(3), 157–171. doi: 10.22492/ije.5.3.08.
- Rahman, A., & Azwan, A. (2022). Pelatihan penggunaan podcast dan audiobook untuk meningkatkan kemampuan berbicara peserta kursus di LKP-MEC Namlea. *KACANEGARA: Jurnal Pengabdian pada Masyarakat*, 5(1), 1–10. <https://doi.org/10.28989/kacanegara.v5i1.963>
- Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory Into Practice*, 47(3), 220–228.
- Romadona, R., Harahap, E. P., & Rahmawati. (2025). Pengaruh penggunaan podcast terhadap keterampilan berbicara pada siswa SMP Negeri Satap 6 Tanjung Jabung Timur. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(4). <https://doi.org/10.23969/jp.v10i04.35291>
- Rosell-Aguilar, F. (2007). Top of the pods - In search of a podcasting “pedagogy” for language learning. *Computer Assisted Language Learning*, 20(5), 471–492.
- Stoller, F. L. (2006). Establishing a theoretical foundation for project-based learning in second and foreign language contexts. In G. H. Beckett & P. C. Miller (Eds.), *Project-based second and foreign language education: Past, present, and future* (pp. 19–40). Greenwich, CT: Information Age Publishing.
- Subhayni, S., Sa'adiah, S., & Armia, A. (2017). *Keterampilan berbicara*. Banda Aceh: Syiah Kuala University Press. <https://doi.org/10.52574/syiahkualauniversitypress.276>
- Suriani, A., Chandra, C., Sukma, E., & Habibi, H. (2021). Pengaruh penggunaan podcast dan motivasi belajar terhadap keterampilan berbicara pada siswa di sekolah dasar. *Jurnal Basicedu*, 5(2), 800–807. <https://doi.org/10.31004/basicedu.v5i2.832>
- Tarigan, H. G. (2008). *Berbicara sebagai suatu keterampilan berbahasa*. Bandung: Angkasa.
- Thomas, J. W. (2000). *A review of research on project-based learning*. San Rafael, CA: Autodesk Foundation.
- Vlachopoulos, D., & Makri, A. (2024). A systematic literature review on authentic assessment in higher education: Best practices for the development of 21st century skills, and policy considerations. *Studies in Educational Evaluation*, 83, 101425. <https://doi.org/10.1016/j.stueduc.2024.101425>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wahyuni, M. S., & Pulungan, R. (2025). Pemanfaatan media podcast sebagai sarana pembelajaran untuk meningkatkan kemampuan berbicara siswa kelas VIII Sekolah Menengah Pertama Negeri 23 Medan tahun pelajaran 2024-2025. *Bahastra: Jurnal Pendidikan Bahasa dan Sastra Indonesia*, 10(1). <https://doi.org/10.30743/bahastra.v10i1.12237>
- Wakefield, A., Pike, R. K., & Amici-Dargan, S. L. (2023). Learner-generated podcasts: An authentic and enjoyable assessment for students working in pairs. *Assessment & Evaluation in Higher Education*, 48(7), 1025–1037. doi: 10.1080/02602938.2022.2152426.
- Widiastuti, W., & Citta, A. B. (2025). Digital literacy meets language pedagogy: Podcast-driven innovation for developing speaking and listening proficiency.

*REiLA: Journal of Research and Innovation in
Language*, 7(3), 222-233.
<https://doi.org/10.31849/rm7f6x77>.