Title

Your AI Podcast Study Buddy

Name/Affiliation

Jason Porter Instructor in Visual Communications School of Journalism and Mass Communications University of South Carolina jasonporter@sc.edu

Biography

Jason Porter is a creative technologist, award-winning animator/designer with a career spanning top global brands like Marvel, Volkswagen, Target, Taco Bell, and Disney. As a member of the Academy of Television Arts and Sciences, he blends his expertise in visual storytelling with emerging technologies to push creative boundaries. His interests explores the narrative potential of interactive and immersive media to reimagine storytelling in children's literature, museum experiences, and historic site interpretation. Passionate about integrating cutting-edge tools into his creative pipeline, Porter constantly experiments to uncover novel approaches in his work. As an educator, he fosters a student-centered approach, emphasizing both technical proficiency and personal growth, while collaborating with industry partners to equip students with the skills and adaptability needed for the evolving creative landscape.

Title: Your AI Podcast Study Buddy

Abstract:

While AI is often discussed as a tool for efficiency, this project leverages AI to enhance student engagement and study habits by developing an AI-generated study podcast. Rather than providing a traditional study guide, the Podcast Study Buddy allows students to reinforce key concepts in an accessible, mobile-friendly format. Student feedback and test performance data suggest that this approach positively impacts comprehension and retention. This method can be applied to any lecture-based course, offering educators a scalable, cost-effective, AI-driven way to support student learning beyond the classroom.

Introduction:

The idea for an AI-generated study podcast is not about efficiency—it is about meeting students where they are. My students have historically struggled with tests, and their course evaluations made two things clear: they feel the exams are harder than expected for a 200-level course, and they want structured study materials. A traditional study guide may seem like the obvious solution, but many students treat them as a checklist rather than truly engaging with the material. Instead, this study method provides a tool that feels natural, accessible, and useful without promoting rote memorization.

Since I have recorded video lectures for an online section of the course, I have a wealth of material to pull from. I transcribed the lectures using NoteGPT and supplemented them with PDFs of my slides, ensuring that my original wording and emphasis was preserved. I uploaded the materials into NotebookLM and used its *Deep Dive Conversation* tool to generate a study podcast. I need to mention that NotebookLM is a multi-modal LLM; something I realized after creating the first podcast. I have since streamlined the process by simply uploading mp4 videos of my lectures instead of a combination of transcripts and lecture slides.

The first attempt was not promising. The AI hosts talked about the material, but it felt disorganized—like two people vaguely familiar with the content, discussing it without any structure. It covered topics unevenly, sometimes diving into one area while barely mentioning another. Clearly, I needed more control over how the AI engaged with my source material.

Through trial and error, I refined my prompt to frame the conversation to:

- Evenly covered all four main topics on Test 1.
- Discuss concepts conversationally, making review more engaging.
- Promote contextual listening, allowing students to reinforce ideas while commuting or multitasking (fig. 1)

To enhance engagement, I used Adobe Audition to add intro/outro music for a polished feel, lighthearted historical ads (e.g., an old Oscar Mayer jingle) to make the experience more enjoyable, and an informational commercial break to provide reminders about the upcoming test date and homework deadline. For accessibility, I uploaded the final podcast to SoundCloud.com, posting a link to Blackboard rather than uploading it directly to the LMS. Student use SoundCloud to stream music and can easily stream the podcast on their phones this way.

Podcast Link: https://tinyurl.com/AI-PodcastStudyBuddy

Learning Outcomes

To evaluate the effectiveness of the podcast, I analyzed both student performance data and qualitative feedback from a questionnaire given after Test 1. The results show that integrating Algenerated study materials led to measurable improvements in student comprehension and engagement (fig. 2). The direct alignment between podcast content and test questions reinforces how the Al-generated study tool supports student learning (fig. 3). Qualitative feedback from students suggests that the podcast is a valuable addition to their study routines. Students find the structured conversational format helpful, making the material feel more engaging and reinforcing key course themes (fig. 4). By the morning of Test 1, the podcast had 55 plays (43 the morning of) for a class of 37 students, with some students listening multiple times (fig. 5). This suggests that students found the resource useful, even if they engaged with it at varying levels.

While some students still prefer traditional study methods, feedback indicates that the podcast is a useful supplement to their notes (fig. 6). However, some students recommend additional improvements, such as additional guided questions to help them focus on key takeaways (fig. 7).

Although the primary innovation is the AI-generated podcast, student performance data also suggests a positive impact. Students in Spring 2025 scored 6.7 percentage points higher than those in 2024. While multiple factors may contribute to this, the introduction of the Podcast Study Buddy provides a structured, accessible study resource that was not available in previous semesters.

Beyond the test score improvements, the success of the Podcast Study Buddy highlights Al's potential to enhance student engagement beyond efficiency-based tools. The podcast meets students where they are—on their phones, in transit, or studying in short bursts. It encourages contextual reinforcement of key concepts, complementing traditional study habits without replacing them. Lastly, it introduces a novel way to integrate Al into teaching, focusing on student experience rather than just assessment design.

Key Takeaways:

This project aligns with ACEJMC's emphasis on media literacy and critical thinking by equipping students with AI-driven study tools that enhance comprehension beyond traditional methods. This podcast showcases AI as a tool for enhancing student engagement and comprehension, extending its role beyond automation. It highlights AI's potential to reinforce concepts, expand learning beyond class, and offer accessible study resources. The success of this project suggests that AI-generated audio tools can meaningfully support modern pedagogy.

Conclusion:

By integrating AI-driven tools into student learning, the AI Podcast Study Buddy enhances engagement by offering a flexible, structured study resource that improves test performance and received positive feedback. Rather than replacing traditional learning, it shows how AI can help educators make material more accessible, interactive, and aligned with modern study habits.

Supplemental Materials

Tools used: NotebookLM.google.com, NoteGPT.io, Adobe Audition, SoundCloud.com

Fig 1. Prompt used to frame the *Deep Dive Conversation* in Notebook LLM

This a study podcast for Principles of Visual Communication evenly covering the following key topics from the sources: visual literacy, classic, modern, and digital ages of visual communication. The tone should be engaging and conversational, reinforcing key concepts while connecting them to real-world applications. Provide examples, ask rhetorical questions, and ensure the podcast feels like a guided study session rather than a lecture. Please add one break for a commercial.

Fig. 2. Test Scores for Test 1 over a three-year period

Year	Test Format	Average Raw Score	Percentage Score
2025	AI-Podcast Supplemented Test	30.29 / 40	75.74%
2024	Instructor-Written, No Al Support	13.81/20	69.04%
2023	Instructor-Written, No Al Support	14.21/20	71.06%

Fig. 3. Example of Podcast Supporting a Test Question:

How does the evolution of cell phone design demonstrate the relationship between design and technology?

- a) Advancements in technology limit the creativity of designers.
- b) Technological advancements drive design innovation while design influences future technological development. *(correct answer)*
- *c*) Technological progress has minimal impact on design principles.

Podcast Excerpt (3:52-4:33):

Technology and design, they're like, you know, constantly pushing each other forward. Think about how cell phones have changed. Oh, yeah. From those brick phones to the sleek ones we have now. Right. Those early ones, they were limited by what technology could do back then. But as technology got better, phones got smaller, screens got bigger, and people wanted them to do more and more. So it's not just about the look of the phone. It's about what it can do, how we interact with it. Exactly. Every step in that evolution from those clicky keyboards to touch screens to voice assistants, design has to adapt to those new possibilities. So it's like a dance between design and technology. Always moving, always changing. Exactly.

Fig. 4. Responses from Study Materials Questionnaire

Did you listen to the study guide podcast provided for the test? 21 responses

How helpful did you find the podcast as a study guide for the test? 21 responses



Fig 5. Soundcloud statistics



Note: Av******e1 is a student in JOUR203.001-SPRING2025

Fig. 6 Response from Study Materials Questionnaire about additional study materials

What other study mate 21 responses	erials did you u	use?			
Class Notes A friend's notes from a prev Study Group Quiztet - Created your own fl Quiztet - Used pre-existing fl StudyBue Cheng Course Hero Brainly ChatGPT or other Large Lan Other I didn't use any study materials	-1 (4.8%) -0 (0%) -1 (4.8%) -0 (0%) -0 (0%) -2 (9.5%) -2 (9.5%) -0 (0%)	—7 (33.3%))	-14 (66	_21 (100%) .7%)	
(0 5	5 10	15	20 2	25

Fig. 7 Response Suggestions from Study Materials Questionnaire



Note: No, or a variation of No was given for 4 responses.