Podcasts as Pedagogy: A framework for utilizing podcast-based learning in the education classroom

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Abstract

Podcasts have become a valuable means of professional development, teaching, and learning for practicing educators. This article details a practical approach for using podcast-based learning with K-12 pre-service teachers. The authors detail a framework to bring the educational value of podcasts to the education classroom.

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Podcasting has become a global multi-billion dollar industry, and it is projected to reach over 130 billion USD by 2030 (Grand View Research, 2024). It, therefore, should come as no surprise that over half of U.S. adults (ages 30-64) and two-thirds of young adults (ages 18-29) say they have listened to a podcast in the past 12 months (Pew Research Center, 2025). This statistic is important because it shows that young adults are the typical age group listening to podcasts. So, why not reach students using a platform they are already using, such as podcasting? There are a variety of reasons that podcasting as a medium has become so popular among these demographics, including listening for learning, entertainment, diversion, or having something to listen to while doing another task (Shearer et al., 2023).

While listening to podcasts for professional learning is an emerging trend in education, a 2023 survey study of over 5,000 educators reported that approximately 43% of educators listen to educational podcasts (Edge Foundation, 2024). Consistent with the general population listening habits as reported by Shearer et al. (2023), McNamara and Min (2024) surveyed over 600 educators and identified five motivational factors for listening to podcasts:

1. Information Gathering: Listening to podcasts for education related tasks, such as professional development and learning to gain new ideas for professional practice.
2. Flexibility in Use: Listening to podcasts because they are convenient and easy to use.
3. Social Interaction: Listening to podcasts to relate to others and build relationships.
4. Entertainment: Listening to podcasts for fun, relaxation, and enjoyment.
5. Professional Encouragement: Listening to podcasts due to "word of mouth" or encouragement from colleagues.

Similarly, Engzell et al. (2025) reported that effective educational podcasts should be 20 to 30 minutes in length, involve enthusiastic and entertaining speakers, and contain real world examples, case studies, and narratives of teaching practices. These factors, though often intersecting, showed variability for preference. Specifically, McNamara and Min (2024) highlight both "information gathering" and "flexibility" with the highest mean scores. These findings are consistent with the broader picture of professional learning for educators.

Professional learning for educators should, first and foremost, be content driven and aligned with the educator's subject-matter, curriculum scope and sequence, instructional methods, grade level, and content-specific instructional strategies (Darling-Hammond et al., 2017; DeMonte, 2013). When contextualized to educational podcasts, this recommendation is further supported by the findings from the Edge Foundation (2024) report. Compared to all categories for educational podcasts, educators reported listening to subject-specific educational podcasts above all other categories, which include research and theory, career development and professional development, resources and lesson ideas, teacher well-being and support, news and current affairs, leadership, and educational technology (Edge Foundation, 2024).

Flexibility is another key characteristic of quality professional development in the 21st century (Evers et al., 2021). Considering budget, travel, and time constraints, Jung (2005) suggested the increasing need to utilize information and communication technology (ICT) to facilitate quality professional learning. In the post-pandemic era, this suggestion has become a key component of professional learning for educators (Copper, 2024). Information and communication technology, such as podcasts, webinars, and YouTube videos, provides an accessible means for formal professional development and informal self-directed learning (Plaza del Pino & Cabezón-Fernández, 2025; Seenivasan, 2024). Listeners can tailor their listening to their learning preferences and needs; for example, they can fast-forward, pause, rewind, or speed-up or slow-down listening (Plaza del Pino & Cabezón-Fernández, 2025). This key feature of flexibility as it relates to podcasting, also supports accessible options for listeners. Podcasts are on-demand learning. They can be utilized when needed (Lee et al., 2008) or when the listener is working on a mundane task and wants to have something to listen to at the same time (McNamara & Min, 2024; Shearer et al., 2023).

Podcast-Based Learning for Pre-Service Teachers

Podcasting has become increasingly common in educational contexts, including podcast-based learning with pre-service teachers who generally have a favorable attitude toward podcasts (Guler & Ozkan, 2018). As a result, podcast-based learning, which refers to using podcasts as a learning tool, can be a valuable pedagogical strategy for college professors to utilize with pre-service teachers (Götzfried et al., 2024). In higher education, professors have used podcasts to "flip classrooms" (Suire et al., 2026), share lectures (Forbes, 2011), and assess learning (Westwood et al., 2025).

There are significant benefits for having pre-service teachers listen to podcasts as a pedagogical learning tool. First, podcasts can fill the gap between the methodology pre-service teachers learn in their college courses and the practice of teaching, which is often limited to observation and beginning practicum work (Malushko, 2015). With video and/or audio podcasts, pre-service teachers can hear narratives from practicing classroom teachers and get a glimpse into real classrooms (Malushko, 2015). From these narratives, they can gain new ideas and strategies to implement into their own classrooms. Also, pre-service teachers hear a different perspective and experience on the topic, other than the instructor. Additionally, podcast-based learning can provide a new means for student engagement. Considering the principles of Universal Design for Learning (UDL), which calls for educators to consider multiple means of representation, engagement, and action and expression in their teaching, podcast-based learning provides instructors with an opportunity to engage students with new digital media. It also offers additional opportunities for representing content in an audio-based format, which can improve both learning and engagement (CAST, 2018; Gunderson & Cumming, 2023). Finally, if educators choose to have their pre-service students create their own podcasts, it provides an innovative approach for expression (CAST, 2018; Chen & Ben-Atar, 2025; Gierhart & VanValkenburgh, 2023; Gunderson & Cumming, 2023; Kurniawan, 2022; Smith et al., 2022).

Specifically relating to pre-service teachers, the research indicates that podcast-based learning may offer opportunities for nuanced learning and processing. For example, Götzfried et al. (2024) determined that requiring pre-service teachers to listen to educational podcasts was a successful strategy for pre-service teachers to challenge educational myths. They concluded that podcast-based learning supports pre-service teachers as they grapple with challenging educational content and research. Additionally, podcasting can also help pre-service teachers develop and improve their listening skills, a vital skill for the profession of teaching (Hasibuan & Male, 2022).

While there is plenty of opportunity for innovation and creativity with podcast-based learning in teacher education (Savall Ceres & Villafán, 2025; Thomas et al., 2025), barriers and challenges do exist (Rodriguez, 2024). In a study on higher-education educators' perceptions of using podcasts as a pedagogical tool, Rodriguez (2024) reported the following barriers: "time constraints (38.7%), technical difficulties (22.6%), student engagement (9.7%), and a lack of suitable content (6.5%)" (p. iii). Savall Ceres and Villafán (2025) concurred with challenges for time constraints and lack of content and added the lack of institutional training and support. These findings indicate that professor training and institutional support is an important consideration.

Theory Into Practice

Considering the benefits and challenges identified in the current literature on utilizing podcasts with pre-service teachers, the authors developed a theoretical framework to support the implementation of podcast-based learning with pre-service teachers. The Podcast-Based Learning Framework is designed to implement podcasts as a pedagogical strategy in pre-service teacher curriculum. This framework is comprised of three tiers based on a proficiency ladder. Though all three levels are designed to support the faculty member in developing podcast-based learning content, the progression moves from entry level in Level 1 to advanced in Level 3.

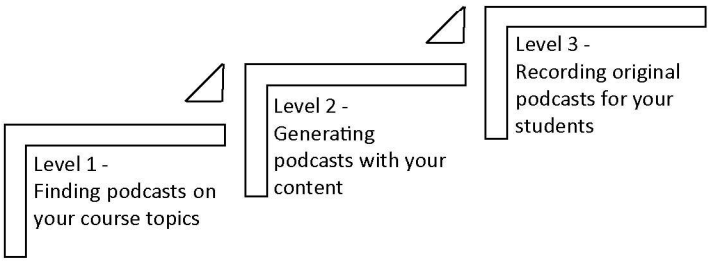
Level 1 - Finding Podcasts on Your Course Topics

The first level is finding podcast episodes related to course topics. According to Hennig (2017), professors generally identify content for their pre-service students in two ways: by browsing podcast platforms and through professional recommendations. Hennig (2017) also identified that one of the major challenges

of utilizing podcasts in higher education was improving discovery. Since then, methods to locate podcasts have greatly improved.

Figure 1

Podcast-Based Learning Framework



Recent improvements include digital media streaming platforms that have expanded significantly. For example, Spotify, Apple Podcasts, and YouTube are now large searchable digital media databases that use algorithms based on your search history to provide featured podcasts. Additionally, specialized search tools, such as PodSearch, Podchaser, and Listen Notes allow users to search via keywords and filter functions to discover podcasts that meet search criteria. These options allow professors to search categories and keywords to find topics that relate to pre-service teacher learning.

Discovering podcasts through recommendations can support self-directed listening and learning (McNamara & Min, 2024) and assist in discovering course content (Hennig, 2017). Personal recommendations are valuable in this context; though, they often come randomly. Fortunately, there are social media sources designed for sharing podcast recommendations (Hennig, 2017). Reddit, Facebook, and Goodpods are examples of social-driven websites where users can interact with other listeners to discover podcasts for specific topics. Reddit and Facebook specifically have forums and groups that are exclusive to educators. The following resources offer professional recommendations for content: EduMagic, The Cult of Pedagogy, Angela Watson's Truth for Teachers, Take Note!, Teaching Today, House of EdTech, The 10 Minute Teacher Podcast, and The Shake Up Learning Show.

Level 2 - Generating Podcasts with Current Course Content

If a professor cannot find pre-made content that meets the needs of their course curriculum as described in level 1, level 2 of the framework details generating podcasts with current course content using technology. All professors have acquired their "tried and true" course materials that are meaningful resources for their students. At level 2, professors can utilize this course content to generate podcasts.

There are several tools that have the ability to take course content and create an AI-generated podcast. Although this area continues to evolve, Table 1 highlights three commonly used platforms and their associated costs.

The tools outlined in Table 1 generate podcasts based on the professor's input; therefore, there are options to help the podcast reflect the desired content. For example, the professor can edit the script to include personal stories, experiences, class references, and real-world applications, which are key components for using podcasts for professional learning (Engzell et al., 2025). This maintains authenticity and connection as the learner listens. Additionally, barring cost restraints, the instructor can adjust the length, pace, and voices to improve engagement, though it should be noted that these podcasts use AI generated voices (Plaza del Pino & Cabezón-Fernández, 2025). Still, students may benefit from the ability to adjust the speed and listen multiple times. This flexibility underscores the importance of presenting material in varied ways, ensuring that all learners have equitable opportunities to understand, engage with, and make meaning from the content based on how they learn best (CAST, 2018; Gunderson & Cumming, 2023).

This level of the framework requires some technological savviness. For example, the user must be able to access the tool, log in, navigate the interface to the chosen podcast tool, generate a podcast using AI prompting and external sources (e.g. YouTube and course documents), and share the podcast via a link. Because this area continues to develop, more tools may become available to increase accessibility, function, and quality. However, there are limitations and previously generated content may be removed or be relocated behind a paywall, making previously stored content inaccessible. Therefore, while this option is more accessible than recording podcasts, it is not as reliable as the topic to be described in level 3.

Table 1

AI Tools for Generating Podcasts

Tool	Description	Cost
NotebookLM	NotebookLM is an AI-powered research and learning assistant developed by Google Labs. This platform allows educators and users to interact, organize, and curate new outputs of their own documents and materials. Once the sources have been added, the educator then prompts the platform to generate a conversational podcast script that explains the main points and key concepts, while including examples and details surrounding the content.	NotebookLM is currently free with a personal Google account but has limits for how many Notebooks can be created.
BriskTeaching	BriskTeaching is an AI platform that is integrated into Microsoft and Google tools. While BriskTeaching has a variety of educational functions, one of their featured resources is a podcast generator for educators. This function gives professors the option to type in a topic or upload course documents to generate a two-person podcast.	The free version requires a login and will generate podcasts up to 2 minutes in length. The Educator Pro version is $99 a year and allows for 4–5-minute podcasts.
NoteGPT	NoteGPT is marketed as a learning assistant, not an educator tool; however, it includes a podcast generator option that includes many options for the output. This includes up to six speakers, several length options, and the ability to upload content from YouTube, pdfs, and external links.	The Educator version is listed as free with a subscription, but it is unclear if the subscription will change to charged. There are limits to the number of "quotas" that can be used.

Level 3 - Recording original podcasts for your students

The third and final level of the framework is developing, creating, and recording an original podcast for content delivery with pre-service teachers. Recording a podcast does not require expensive equipment or software (King & Gura, 2008); however, there is a significant time commitment and learning curve involved with recording original content and many users will opt for the convenience of paid subscriptions. Although it can be as simple as recording via a smartphone voice memo or a cloud-based recording interface, such as Zoom, most podcasters need significant practice before being able to record quality content. Rime et al. (2022) interviewed 16 professional podcasters and identified a consistent workflow: pre-production, production, and post-production. Pre-production requires a noteworthy time commitment in preparation for recording. This includes brainstorming topics, researching the topic, and writing scripts and outlines. While some professors will already have the content they need in mind, synthesizing the information in a script that is engaging can be time consuming.

Production relates to the act of recording. Even if the user is reading a script, it takes practice to speak in a natural way when recording while also avoiding speaking errors. Additionally, a quiet space and a quality microphone help facilitate a smoother recording experience. Though free applications are available for recording audio content, subscription-based computer software, such as Audacity, GarageBand, or Camtasia, can save time with options for editing the sound and content. Though Rime et al. (2022) note that in other

industries, such as film, editing happens in post-production, with podcasting, editing generally happens during recording. This process involves adjusting volume levels, removing filler words, shortening long pauses, and deleting spoken errors during production using subscription-based editing software. As a result, recording takes longer than simply reading a script. Finally, these programs can add professional touches including an introduction with music, an outro, or special segments throughout the show. As with any technology, learning how to edit audio files takes time and practice.

In post-production, the user publishes the recording. Professors must decide whether to publish the podcast publicly or keep it private in the learning management system accessible to only the class. If the professor chooses to publish it publicly, meaning it is listed on podcast platforms, such as Apple Podcasts or Spotify, then they will need to use a podcast hosting service, such as Spotify for Podcasters or Podbean, which comes with a cost.

Although getting started with podcasting is not as simple as clicking "record," it provides an opportunity to provide professors and future teachers with professional audio learning experiences for content that is not available anywhere else (King & Gura, 2008).

Implications and Conclusion

The proposed framework was designed to address the challenges that professors face when utilizing podcast-based learning in their coursework. In the context of teacher preparation, this framework should effectively and efficiently support pre-service teacher learning. Therefore, there are several implications and conclusions.

First, because research suggests that subject-specific content is ideal for professional learning, the Podcast-Based Learning Framework is intended to support professors to find targeted content (Darling-Hammond et al. 2017; DeMonte, 2013; Edge Foundation, 2024). Because of this, the framework should support educators in overcoming barriers to implementation, specifically due to the time commitment of finding podcasts and not being able to find podcasts for the content they need (Rodriguez, 2024; Savall Ceres and Villafán, 2025). Each level intentionally specifies ways to find subject-content in efficient and effective ways.

Additionally, this framework should provide a flexible means for adapting instruction to student learning preferences. This consideration is in line with Universal Design for Learning (UDL) (CAST, 2018; Gunderson & Cumming, 2023). As a result, podcast-based learning should provide a meaningful way for professors to offer new ways for engagement and representation of content (Chen & Ben-Atar, 2025; Gierhart & VanValkenburgh, 2023; Gunderson & Cumming, 2023; Kurniawan, 2022; Smith et al., 2022). In addition to differentiated meaning making and understanding information, professors can perhaps even offer a new way for action and expression if they take the next step and ask students to create their own podcasts (Chen & Ben-Atar, 2025; Gierhart & VanValkenburgh, 2023; Gunderson & Cumming, 2023; Kurniawan, 2022; Smith et al., 2022)

In relation to engagement, this framework follows the research recommendation to use podcasts with dynamic speakers and narratives within a 20—30 minute time limit (Engzell et al., 2025; Malushko, 2015). At Level 1, the instructor has the freedom to search for podcast episodes that meet this recommendation. For Level 2, the instructor can use AI to develop engaging conversation-based narratives with sources, such as Notebook LM and Brisk Teaching, and for Level 3, educators can use these guidelines to record their own podcast episodes using authentic, engaging voices and conversations with first-hand narratives. All of these options provide the instructor with the means to fall within the suggested timeframe (Engzell et al., 2025).

Finally, this framework works to address the technical difficulties that were cited as a barrier to adopting podcast-based learning in higher education classrooms (Rodriguez, 2024; Savall Ceres & Villafán, 2025). To address varying levels of proficiency with podcast-based learning and digital media, the framework seamlessly integrates application recommendations and directions at each level. Additionally, it utilizes a tiered system to begin with less advanced technical applications and moves to more advanced applications with experience and proficiency. This framework supports professors by meeting them where they are comfortable in implementing educational technology in a meaningful way for content delivery and assessment. It goes be-

yond the textbook to provide students with a different lens from which to learn and a unique perspective beyond what is offered by the professor.

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