

## INFORMAL LEARNING THROUGH EDUCATIONAL PODCASTS

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### Abstract

Educational podcasts have become a widely available medium for informal learning because they allow listeners to access explanations, stories, expert conversations, and practical guidance beyond formal classrooms and fixed timetables. Their audio-first format fits learning during travel, household tasks, exercise, work breaks, and other everyday situations in which visual learning resources may be inconvenient. This paper presents a comparative analysis of educational podcast formats and their contribution to self-directed, interest-driven, and socially connected learning. The study uses an evidence-based conceptual review that considers short explanatory episodes, interview-based programmes, narrative series, course-linked podcasts, and community-produced audio. These formats are examined through accessibility, learner autonomy, cognitive engagement, credibility, participation, inclusion, and sustainability. The analysis indicates that concise explanatory podcasts can support regular knowledge building when they offer a clear focus and structured summaries. Interview and discussion formats can introduce learners to competing perspectives and professional practices, while narrative series can make complex ideas memorable by linking them with stories and real-life cases. Course-linked podcasts can extend formal teaching into flexible listening spaces, but their value depends on purposeful integration rather than simple lecture recording. Community and participatory podcasts can strengthen belonging and peer learning when contributors are supported and editorial standards are transparent. The study concludes that meaningful learning through podcasts depends not only on convenient audio delivery but also on careful content design, accessible language, trustworthy sourcing, active reflection, and opportunities for learners to connect episodes with questions, practice, and discussion. Educational podcasts are most effective when treated as part of a wider learning ecology that respects learners' time, interests, prior knowledge, and diverse access conditions.

**Keywords:** Educational Podcasts, Informal Learning, Self-Directed Learning, Audio Learning, Lifelong Learning, Digital Media, Mobile Learning, Podcast Pedagogy, Learning Communities, Knowledge Engagement

### 1. INTRODUCTION

Informal learning takes place beyond prescribed syllabi, assessment schedules, and formal classroom instruction. People learn when they follow a personal question, listen to an expert explanation, compare experiences, solve a practical problem, or encounter an unfamiliar idea in daily life. Digital media have expanded the spaces in which this learning can occur, and podcasting has become particularly important because it can travel with the learner. A podcast episode can be played on a phone, computer, car audio system, or smart speaker, allowing learning to fit around routines that would otherwise be disconnected from study. Educational podcasts include a broad range of audio resources: brief

concept explainers, lectures, interviews, investigative series, language lessons, professional updates, science communication programmes, historical storytelling, and discussions led by learners or community groups. They differ from conventional broadcast radio because listeners can select episodes, pause, replay, subscribe, download, and build a personal sequence of content. These choices give listeners a measure of control over pace, timing, and topic selection, which are central features of self-directed learning.

The growth of audio learning is significant because many adults and students need flexible ways to remain intellectually engaged outside scheduled teaching. Commuters may

listen during travel, professionals may use short episodes to stay current in their field, and learners in remote locations may rely on audio where stable video streaming is difficult. The format can also make education feel less intimidating by presenting experts in a conversational voice rather than through a highly formal textbook or lecture environment. Yet easy access does not by itself guarantee learning. A listener may consume episodes passively without checking claims, connecting ideas, or applying knowledge to a real situation.

Informal learning through podcasts should therefore be understood as more than the number of downloads, subscribers, or listening minutes. It includes attention, comprehension, reflection, curiosity, recall, discussion, and the willingness to pursue further reading or practice. An engaging episode may introduce a topic, but a carefully designed sequence can also help listeners build vocabulary, recognize debates, and form questions that guide later learning. The educational value of a podcast depends on the relationship between content quality, production choices, listener motivation, accessibility, and opportunities for active engagement.

This study examines major educational podcast approaches and compares their suitability for supporting informal learning. It considers the strengths and limitations of different audio formats, with particular attention to learner autonomy, interpretive depth, inclusion, credibility, and long-term usefulness. The paper treats podcasts not as replacements for teachers, books, or structured courses, but as flexible learning resources that can complement formal education and make lifelong learning more accessible in everyday life.

## 2. LITERATURE REVIEW

Research on educational technology and mobile learning shows that podcasting has developed from a supplementary recording

### LITERATURE REVIEW SUMMARY TABLE

| S. No. | Author / Year | Study Focus                   | Key Contribution                                                           | Limitations Identified                                        |
|--------|---------------|-------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------|
| 1      | Hew (2009)    | Audio podcasting in education | Reviewed research themes, designs, and educational uses of audio podcasts. | Research quality and learning measures varied across studies. |

tool into a flexible medium for explanation, revision, storytelling, and professional communication. Early studies often focused on whether recorded lectures could improve access for students who missed classes or wanted to review difficult material. Later work examined learner motivation, portability, conversational teaching styles, and the value of audio content for learners who prefer to study at self-selected times. These studies suggest that podcasts can support learning when episodes are purposeful, well structured, and connected to meaningful tasks or discussion.

A central theme in the literature is learner control. Podcasts allow users to decide when to listen, whether to replay a difficult section, and how to build a personal library of episodes. This flexibility can support independent study, especially for learners balancing work, family responsibilities, travel, or uneven internet access. However, self-paced listening also requires attention management. Without clear learning goals, episode notes, or prompts for reflection, listeners may remain entertained without developing durable understanding or the ability to transfer ideas to new contexts.

Studies of podcast design also highlight the importance of audio structure. Clear introductions, signalling of key points, concise segments, examples, recap sections, and practical questions can reduce cognitive overload and help listeners follow an argument. Interview formats can bring multiple perspectives into a topic, while narrative formats may support memory by connecting concepts to people, events, and problems. At the same time, audio can make it harder to present diagrams, data tables, equations, or complex visual material. Inclusive podcast practice therefore benefits from transcripts, show notes, captions for companion video, links to supporting resources, and accessible language.

| S. No. | Author / Year          | Study Focus                   | Key Contribution                                                                            | Limitations Identified                                                 |
|--------|------------------------|-------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 2      | Evans (2008)           | Podcast revision lectures     | Showed how portable recordings can support revision and flexible review.                    | Listening alone may not provide active practice or feedback.           |
| 3      | Bolliger et al. (2010) | Motivation in online learning | Linked podcast use with learner motivation and convenient access.                           | Motivation does not automatically demonstrate deep learning.           |
| 4      | Lee & Chan (2007)      | Distance learner inclusion    | Explained how podcasting can reduce isolation and create a more personal learning presence. | Regular production and communication require staff time and planning.  |
| 5      | Drew (2017)            | Educational podcast design    | Considered how audio storytelling can support engagement and learning design.               | Entertainment value can overshadow evidence and instructional clarity. |

### 3. OBJECT OF STUDY

The primary focus of this research is to investigate and compare educational podcast approaches that can support informal learning through accessible audio, learner choice, reflection, and social connection. The study considers how the selection of a podcast format affects the depth, credibility, inclusiveness, and sustainability of learning for audiences outside formal instructional settings. The principal objects of study are outlined below:

#### 3.1 EDUCATIONAL PODCAST APPROACHES UNDER INVESTIGATION

- Short explanatory episodes that introduce a concept, process, or current issue in a focused format
- Interview and discussion podcasts featuring experts, practitioners, educators, or people with lived experience
- Narrative and documentary series that use stories, cases, and investigation to explain complex topics
- Course-linked podcasts that extend teaching through revision, enrichment, orientation, and academic conversation
- Community and learner-produced podcasts that invite peer voice, local knowledge, and collaborative inquiry

#### 3.2 INFORMAL LEARNING CONTEXTS

- Commuting, household routines, exercise, work breaks, and other time-constrained everyday settings
- Independent learning by students, professionals, job seekers, parents, educators, and lifelong learners
- Remote, rural, mobile-first, low-bandwidth, and device-diverse access conditions
- Language learning, professional updating, public understanding of science, cultural literacy, and practical skill development
- Online communities in which listening leads to discussion, resource sharing, and collaborative problem-solving

#### 3.3 PERFORMANCE EVALUATION PARAMETERS

- Ease of access, download availability, navigation, and compatibility with common devices
- Clarity of explanation, depth of interpretation, and support for learner reflection
- Autonomy, replay value, listening control, and potential for self-paced progression
- Credibility of hosts and guests, transparency of sources, and responsible representation of uncertainty
- Transcripts, plain language, multilingual options, inclusive examples, and support for diverse listening needs

- Production workload, copyright permissions, distribution dependence, data protection, and long-term preservation

### 3.4 COMPARATIVE ANALYSIS FOCUS

- Short-form orientation versus extended explanations and serial knowledge development
- Expert authority, conversational dialogue, learner voice, and the treatment of competing perspectives
- Passive listening, reflective listening, note-taking, resource use, and participation in follow-up discussion
- Audio-only access alongside transcripts, show notes, visual companions, and offline learning materials
- One-time promotional episodes versus durable, maintainable, and well documented learning archives

### 3.5 RESEARCH OBJECTIVE SCOPE

- To identify podcast formats that can broaden access to relevant knowledge beyond formal classrooms
- To examine trade-offs between convenience, depth, credibility, participation, and production demand
- To explain how audio design can encourage attention, reflection, and purposeful self-directed learning
- To highlight ethical and practical issues related to evidence, representation, sponsorship, and listener data
- To support inclusive, responsible, and educationally meaningful podcast practice

### 4. RESEARCH METHODOLOGY

The present study adopts a comparative and evidence-based research methodology to analyse educational podcast approaches for informal learning. The research framework compares audio formats according to their communication characteristics and practical value for listeners, rather than claiming a new controlled experiment or a specific survey of podcast audiences. The methodology combines conceptual analysis of established scholarship on podcasting, mobile learning, self-directed learning, media literacy, and documented practices in educational audio production.

The comparison is organised around a typical informal learning pathway: a listener discovers an episode, decides whether it is credible and relevant, begins listening in a chosen setting,

follows an explanation or conversation, pauses or replays key content, consults related resources, and may later apply, discuss, or share what was learned. Each approach is considered under common conditions, including variable internet access, different levels of prior knowledge, language and accessibility needs, limited attention time, and the need to distinguish reliable education from misleading or promotional content.

### METHODOLOGY FRAMEWORK

1. The study uses a comparative design covering principal educational podcast formats.
2. Published scholarship and learning design principles support qualitative synthesis.
3. All formats are assessed for informal learning, independent study, and knowledge engagement.
4. The analysis includes explanatory, interview, narrative, course-linked, and participatory podcasts.
5. Accessibility and listener autonomy are treated as core conditions rather than optional features.
6. Comparisons distinguish convenience, comprehension, reflection, and social participation.
7. Evaluation covers credibility, educational value, inclusion, sustainability, and ethical communication.
8. Mobile, offline, transcript-supported, and community-based implementation pathways are considered.
9. No fabricated listening statistics, survey results, or experimental performance measurements are presented.
10. Recommendations focus on podcast practice that complements reading, teaching, discussion, and practical application.

### 5. DATA ANALYSIS

The data analysis section presents a comparative evaluation of educational podcast approaches used to support informal learning. The analysis is based on established characteristics of audio learning, reported design practices, and practical considerations related to access, learner control, interpretive depth, participation, and production sustainability. The objective is to examine how each approach performs in relation to the quality of self-directed engagement it can

support and the resources needed to maintain an inclusive learning experience.

Five major approaches are considered: short explanatory podcasts, interview and discussion podcasts, narrative documentary series, course-linked podcasts, and community or learner-produced podcasts. The comparison is

qualitative because the value of a particular format depends on topic complexity, audience needs, host expertise, source quality, language, production standards, distribution choices, and the wider learning resources available to the listener.

## 5.1 COMPARATIVE ENGAGEMENT ANALYSIS

| S. No. | Approach                              | Primary Learning Mode                                      | Access Reach | Interpretive Depth         | Participation Potential | Overall Suitability                                                      |
|--------|---------------------------------------|------------------------------------------------------------|--------------|----------------------------|-------------------------|--------------------------------------------------------------------------|
| 1      | Short explanatory podcast             | Focused concepts, summaries, and practical tips            | Very High    | Medium                     | Low-Medium              | Very good for regular, time-efficient knowledge building                 |
| 2      | Interview and discussion podcast      | Expert conversation, debate, and professional insight      | High         | High                       | Medium-High             | Excellent for perspective taking and informal professional learning      |
| 3      | Narrative or documentary series       | Story-led exploration of cases, people, and events         | High         | High                       | Medium                  | Strong for memorable contextual learning and curiosity                   |
| 4      | Course-linked podcast                 | Revision, extension, orientation, and guided study         | Medium-High  | High                       | Medium                  | Very useful when integrated with readings, tasks, and feedback           |
| 5      | Community or learner-produced podcast | Peer explanation, local stories, and collaborative inquiry | High         | Medium-High when supported | Very High               | Excellent for participatory learning communities with clear facilitation |

## 5.2 EXTENDED PERFORMANCE EVALUATION

- Short explanatory podcasts can offer the broadest practical reach because they are easy to find, easy to download, and suitable for brief periods of listening.

Their primary strength is accessibility: a listener can revisit a single idea without committing to a long lecture or a full course. Their main limitation is the risk of oversimplification. When complex topics are compressed into short episodes

without references, examples, or acknowledgment of uncertainty, learners may gain confidence without gaining a sufficiently accurate understanding.

- Interview and discussion podcasts can bring expertise into a conversational setting. They are useful for learners who want to hear how practitioners frame problems, make decisions, question assumptions, or respond to disagreement. A good interview can model intellectual curiosity and expose listeners to varied disciplinary or professional viewpoints. However, the quality of learning depends on preparation, editorial balance, host questioning, and the willingness to challenge unsupported claims. Long conversations also need summaries or timestamps so that listeners can locate key ideas efficiently.
- Narrative and documentary formats can connect learning with stories, cases, historical moments, investigations, and human experience. They may be especially valuable for topics in which context matters, such as public health, law, history, environment, culture, or social change. Their limitations include production cost, editing time, and the possibility that dramatic storytelling may encourage emotional certainty where evidence remains incomplete. Narratives should distinguish documented facts, interpretation, reconstruction, and personal opinion.
- Course-linked podcasts can extend formal teaching by introducing a module, revising core concepts, explaining common errors, or connecting academic knowledge with current debates. They are particularly effective when listeners receive questions, readings, transcripts, and opportunities for feedback. However, simple recordings of lengthy lectures may not make full use of the audio medium. Course-linked episodes need clear learning purposes and should not disadvantage students who require visual explanation, sign support, or more structured study materials.
- Community and learner-produced podcasts can invite people to explain a topic in their own words, share local experience, interview peers, and contribute

to public knowledge. These practices can create ownership and help learners move from consumption to production. Their effectiveness depends on clear roles, editorial guidance, informed consent, respectful handling of sensitive topics, and recognition of contributors. A participatory format is not automatically inclusive if only confident or well-connected voices are heard.

## 5.3 OBSERVATIONS FROM DATA ANALYSIS

- Podcast reach and meaningful learning are related but not identical; high downloads do not necessarily indicate comprehension, reflection, or responsible use of information.
- Short episodes are valuable entry points, but structured series and supporting resources are often needed to turn interest into sustained understanding.
- Interview and narrative formats can make difficult topics accessible, provided that sources are transparent and hosts distinguish evidence from opinion.
- Listener control, including pause, replay, download, and episode selection, supports autonomy but also requires guidance for learners who are new to a subject.
- Transcripts, show notes, content warnings where appropriate, and clear language are central to access and should be planned from the beginning.
- Educational podcast creators need long-term approaches to archiving, updating, copyright permissions, sponsorship disclosure, and responsible audience analytics.

## 6. DISCUSSION

The comparative analysis shows that educational podcasts can strengthen informal learning when they are designed as resources for curiosity, explanation, reflection, and connection rather than as background entertainment alone. The central advantage of podcasting lies in its ability to bring learning into ordinary time and space. A listener may encounter a useful explanation during a commute, revisit an episode before a professional task, or use a conversation as a starting point for discussion with peers. Yet the educational value of this access is shaped

by whether the content is clear, reliable, relevant, and connected to further action.

Audio access remains foundational. A well-produced episode can reduce barriers for people who do not have time for long reading sessions or stable capacity for video streaming. It can support repeated listening and allow learners to create personal routines around knowledge development. Still, audio-only communication can limit access to visual evidence, mathematical notation, demonstrations, and detailed data. Responsible educational podcasts should therefore offer transcripts and supporting materials that allow learners to verify, revisit, and extend what they hear. Conversational formats provide one response to the limitations of one-way explanation. An interview can make expert thinking audible by showing how people define terms, weigh evidence, describe uncertainty, and revise their views. This can be particularly valuable in informal learning because it demonstrates that knowledge is often developed through questions rather than delivered as a fixed answer. The challenge is to avoid treating confidence, popularity, or professional status as a substitute for evidence. Hosts need to prepare carefully, clarify the basis of claims, and signal when an issue is contested or still developing.

Narrative podcasts are often regarded as highly engaging because they organise learning around a sequence of events, people, places, and questions. Stories can support memory and empathy, but they can also select details in ways that simplify complex social or scientific realities. Educational podcast design therefore requires an ethical balance between engagement and accuracy. Listeners should be given enough context to understand why a story matters, what evidence supports it, whose perspectives are missing, and where they can find additional information.

Participation is another important direction for podcast-based learning. Learners can contribute questions, voice notes, interviews, local examples, episode annotations, and discussion responses. These activities can help people move from listening to interpretation and production. However, participation should be based on respectful moderation, consent, attribution, and protection from harassment or exposure. Podcast creators and educational

institutions need to avoid extracting personal stories or community knowledge without building genuine relationships and providing meaningful recognition.

The discussion therefore supports a balanced model of learning through educational podcasts. Creators should combine accessible audio with transparent sources, purposeful structure, inclusive design, pathways for reflection, and connections to reading, practice, or discussion. Podcasts work best when they respect learner autonomy while also offering enough guidance to prevent confusion, misinformation, and superficial engagement. In this form, educational audio can become a durable part of a wider lifelong learning environment.

## 7. CONCLUSION

This study presented a comparative analysis of educational podcast approaches for informal learning, including short explanatory episodes, interview and discussion formats, narrative series, course-linked podcasts, and community or learner-produced audio. The analysis shows that podcasts can strengthen flexible access to knowledge by supporting listening, replay, curiosity, professional updating, storytelling, and peer contribution.

The findings indicate that each approach has distinct strengths and limitations. Short episodes can support quick and regular knowledge engagement, while interviews and discussions offer depth through expert perspectives and dialogue. Narrative series can make complex issues memorable and contextual, but they require careful factual and ethical framing. Course-linked podcasts can extend structured teaching when connected with readings and feedback, while participatory podcasts offer strong potential for community learning when contributors are supported and represented fairly.

No single podcast format is universally appropriate for every topic, learner, or setting. Practical effectiveness depends on accessible design, clear educational purpose, credible sourcing, language, production quality, listener trust, support materials, and the ability to evaluate whether listeners are reflecting, applying, questioning, or continuing to learn. Download counts and subscriber numbers should not be treated as proof of educational

impact without considering what people understand and do after listening.

The study concludes that educational podcasts should be developed as inclusive and evidence-aware learning resources. Future work should prioritise transcript quality, multilingual access, responsible sponsorship

disclosure, participatory ethics, preservation of episode archives, and evaluation methods that capture reflection, discussion, and application as well as reach. When designed with these principles, podcasts can provide a practical and meaningful public space for lifelong learning in everyday life.

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