



## EXPLORING THE ASSESSMENT POTENTIAL OF STUDENT-GENERATED PODCASTS

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### Abstract:

This study explored the assessment potentials of student-generated podcasts within a small-scale classroom context. Participants were students, aged 13-14, who worked in small groups on an inquiry-based project. As part of the task, students interviewed local residents about citizen mobility, analysed data, and produced podcasts to communicate their findings. The podcasts were assessed using a performance rubric, which revealed clear differences in quality across groups. Peer assessment indicated varying levels of cooperation, while students' self-reflections highlighted both the benefits and challenges of the podcast production process. The findings suggest that student-generated podcasts can function as a tool of creative expression, supporting skills in data collection, data analysis, communication, collaboration, and digital literacy. Despite the small sample size, the study highlights the pedagogical values of podcasting as an effective form of assessment that can enhance student learning outcomes.

**Keywords:** assessment, podcasts, peer-assessment, project-based learning, self-assessment

### 1. Introduction

Podcasts have emerged as a significant tool of digital publishing since the 2000s, using internet technology (Drew, 2017; Robinson & Ritzko, 2009). They comprise audio files (Ahn et al., 2016), produced in real time and distributed freely via the internet, enabling users to either download or stream them (Prince, 2020). Podcasts differ significantly from other media forms, primarily due to their online accessibility and easy production. Unlike

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radio, podcasts are not constrained by time limits or schedules, allowing for free access and playability at any time (Drew, 2017). Subsequently, the key feature of podcasts is the ability for asynchronous access, which enables listeners to have accessibility to them at any time by downloading them to diverse media devices, such as smartphones, laptops, computers, and music players (Drew, 2017; Prince, 2020).

Since 2004, podcasts have expanded as a “*popular cultural phenomenon*” (Sullivan, 2019, p. 1). The length and the content of podcasts vary widely (Ahn et al., 2016), providing listeners with a rich repertoire of choices tailored to their needs and interests. A rapidly emerging genre of podcasts is educational podcasts, which have widely been implemented within learning activities recently.

## 2. Literature Review

Podcasts have been widely utilised as an educational tool across various school subjects (Coutinho & Mota, 2011; Ekmekçi, 2017; Hill & Nelson, 2011, 2015; Kay, 2012; Kemp et al., 2011; Phillips, 2017). Their application has been particularly notable in foreign language courses where they provide authentic listening material, helping students to better understand the foreign language and its pronunciation (Sayadi & Heidar, 2018). Similarly, in geography education, podcasts can serve as valuable resources for understanding geographical phenomena and supporting field research through audio guides and recordings (Kemp et al., 2011). In science education, podcasts facilitate the explanations of complex concepts, provide scientific discussions, and familiarise students with the application of scientific theories in real life. Empirical evidence suggests that students’ exposure to science-related podcasts helps them improve their science vocabulary and have a better performance in science knowledge (VanUitert et al., 2022). Likewise, in history teaching, podcasts enrich teaching through storytelling, interviews, and audios, making the lessons more engaging and experiential for students (Swan & Hofer, 2009; Wilkinson, 2013).

Beyond subject-specific applications, systematic research highlights the multiple pedagogical benefits across various subjects and diverse educational environments. Specifically, podcasts have been found to enhance communication and participation skills (Phillips, 2017; Yoestara & Putri, 2019), as well as exploratory talks among students when working on podcasts (Dversnes & Blikstad-Balas, 2023), thereby promoting collaboration among students both in situ and in virtual environments (Tulley, 2011). Particularly, research shows that podcasts impact positively communication skills such as students’ speaking and listening skills (Hasan & Tan, 2012; Yoestara & Putri, 2019), promoting significant improvements, especially in the context of foreign languages (Indahsari, 2020; Mohammed & Khadawardi, 2024). Furthermore, students benefited from turning information into sound, recognizing speaking shortcomings, and conveying their thoughts through their voices (Chen, 2023). In addition, they have been used to support teaching and to promote self-regulating learning (Errabo et al., 2024; Naseri & Motallebzadeh, 2016) and self-directed learning among students, offering the opportunity to learn at their own pace (Yang, 2025) while they can serve as an effective

revision tool, further reinforcing their value in educational settings (Evans, 2008). Notably, podcasts can support differentiated learning as they can meet diverse learning styles in classrooms (Dale, 2007), suggesting them as an empowered educational tool to meet different styles, needs, and interests in diverse student populations. Interestingly, in higher education, undergraduate students exhibited a preference for podcasts over traditional learning materials such as textbooks and their notes (Evans, 2008) or a “dry” paper (Hall & Jones, 2021, p. 60), indicating that podcasts can play a crucial role as educational material in the future at different educational levels.

Nevertheless, Lee et al. (2007) asserted that students should go beyond mere participation in learning activities and suggested that they should also contribute to collective outputs and enhance the group's intellectual capital. Student-generated podcasts can motivate students and engage them in the learning process (Phillips, 2017). The incorporation of student-produced podcasts into education fosters engagement, enhances cognitive skills, supports learning, and stimulates creativity through hands-on experiential learning experiences (Hall & Jones, 2021). However, it is important to note that creating podcasts can be challenging for students, especially if they lack or do not possess adequate inquiry, analysis, writing, and technology skills as well as communication and cooperation skills (Phillips, 2017). Likewise, Hall and Jones (2021) indicated that dislike for group work and learning new digital tools for creating podcasts are big challenges in student-generated podcasts, highlighting that participation skills, and technology literacy skills are crucial factors in producing podcasts.

The primary focus of this study was the creation of podcasts by students within the framework of project-based learning activities in a geography class. The aim of the study was to investigate the potential of student-generated podcasts as an assessment tool in a geography-based project for secondary education students. Specifically, the study seeks to address the following research questions:

- To what extent can the student-generated podcasts enhance their learning in geography-based project activities?
- To what extent can student-generated podcasts contribute to the development of key participation skills and other skills, such as communication and inquiry skills, and creativity?
- What are the benefits and challenges encountered by students throughout the podcast creation process?

Despite the broad implementation of podcasts in various disciplines, limited research has focused on their use in geography-based lessons in secondary education. Literature review indicates that most research pertains to higher education (Brown, 2015; Hill & Nelson, 2011, 2015; Kenna, 2022; Kemp et al., 2011, 2015), where podcasts have been identified as a valuable learning resource for students, supporting geography teaching, promoting geographical knowledge (Jarvis & Dickie, 2010) and deep learning (Kenna, 2022). This research aims to contribute to a deeper understanding of the potential of podcasts as an assessment tool and to evaluate their effectiveness in fostering student learning, engagement, and skill development in the framework of a geography-based project in secondary education.

### 3. Methodology

#### 3.1 Procedure

The authors initiated communication with the model secondary school of Mytilene, Greece, to explore the school's interest in participating in a geography-based project focusing on the mobility in the town of Mytilene, Lesvos Island, in October 2024.

All necessary documentation was submitted to the ethics committee of the authors' university. The study was approved by the ethics committee meeting, No. 5/06.12.2024. Following the approval, further communication followed with the school's administration and the responsible geography teacher to establish the project timeline. The project was scheduled to last approximately 2-3 months, with students of the B3 class expressing interest in participating.

#### 3.2 Participants

The participants in this project were students from the B3 class at the model secondary school of Mytilene. The class consisted of 17 students, including 9 girls and 8 boys, aged 13-14 years. All participants were informed about the purpose of this study, that their participation was voluntary, and that they could withdraw from it at any time.

#### 3.3 The project: design and data collection

The project "Mobility in our town" comprised four phases which are described below. The objectives for the geography-based project were to:

- 1) engage students in activities associated with their daily life,
- 2) enhance students' knowledge on citizen mobility issues in their town,
- 3) develop their inquiry skills,
- 4) develop their communication and cooperation skills,
- 5) develop their digital literacy, and
- 6) enhance their creativity.

#### Phase 1: Project preparations

In phase 1, two meetings were held between the B3 class and the authors to facilitate getting to know each other, explain the project's scope, and design its framework. During the first meeting, the authors visited the B3 class during a geography lesson. The project proposed was linked to Unit 34 "The big cities of Greece", which addresses, among other topics, the challenges of citizen mobility caused by traffic congestion. The authors presented the general scope of the project entitled "Mobility in our town" and introduced students to the issue using a PowerPoint presentation. The presentation focused on citizen mobility and traffic congestion in cities, its main causes, its impact on daily life, and sustainable solutions to reduce congestion.

Following the presentation, a discussion was held to explore the students' interests and deepen their understanding of the topic. An initial timeline of tasks was established, taking into account the students' commitments. Specifically, the students were asked to produce a 10-minute podcast on the mobility of residents in the centre of their town.

At the end of the lesson, the students were divided into four groups. Group 1, consisting of 2 girls and 2 boys, decided to interview people aged 15-30. The Group 2 consisted of 3 girls and 2 boys, and they decided to interview people aged 45-60. Group 3, consisting of 2 girls and 2 boys, decided to interview people aged 30-45, and Group 4, consisting of 2 girls and 2 boys, chose to interview people over 65 years old.

One week later, the students received training from the first author on how to create podcasts with simple steps and on using the audio editing software Audacity.

### **Phase 2: Project designing**

Each group collaboratively designed its own questionnaire. The draft questionnaires were submitted to the geography teacher and the authors for review. Feedback was provided, ensuring alignment with the scope and the objectives of the project. The revised questionnaires were used for the data collection process.

### **Phase 3: Project designing**

During phase 3, the student groups conducted interviews with local residents over a three-week period in January 2025. They worked collaboratively, assuming different roles, including data recording, data analysis, creating the plot for the podcast, and podcast recording. Prior to the recording stage, the students were provided with the podcast evaluation criteria, which included content, structure, duration, presentation, music, technical production, and podcast notes. These criteria are outlined in detail in the 3.1 section "Evaluation of the podcasts".

Following the evaluation criteria, the students proceeded to the recording stage, where they recorded the podcasts, using the following software and sources:

- **Equipment:** microphones, headphones, smartphones, laptops, and desktop computers.
- **Software:** Audacity software was used for audio editing and creating the podcasts.
- **Online sources:** inspiration and examples for podcasts were sourced from online platforms such as PodOmatic and TeacherCast.

Throughout the podcast-production process, students were engaged in collaboration, exchanging ideas, and receiving continuous guidance from the teacher and the first author.

### **Phase 4: Presentation of the project**

The students' podcasts were presented in class, offering a stage for participants to demonstrate and support their work and share their findings with their classmates. The presentation was an important part of the process, as it provided a framework for feedback and discussion on the key issues regarding the procedure.

### 3.4 Data analysis

Descriptive statistics were used to report the assessment of the podcasts based on the rubric's criteria and peer assessment data. Qualitative method analysis was adopted to present the repetitive themes in students' self-reflections.

## 4. Results

### 4.1 Evaluation of podcasts

Out of the four student groups, three successfully completed the production of their podcast. The fourth group, although they worked and prepared the plot for the podcast, did not succeed in recording it in time. The assessment of the three completed podcasts generated by the students was conducted using a performance evaluation rubric with certain qualitative criteria, as outlined in Table 1. This assessment also included the final grade assigned to each group, both for each criterion and for overall performance.

**Table 1:** Assessment of the student-generated podcasts

Category	Excellent (4)	Competent (3)	Fair (2)	Poor (1)	Pod1	Pod2	Pod3
Content (Introduction)	Mentions who is speaking, where they are, the topic, and what the listener can expect.	Mentions most of the elements.	Somewhat interesting but not clear enough.	The introduction is missing or unclear.	4	3	2
Content (Clarity)	The information is accurate and clear.	Provides fairly accurate information	Some information is inaccurate.	Some information is inaccurate.	4	2	3
Content (Vocabulary)	The vocabulary enhances the content.	The vocabulary is appropriate.	The vocabulary is sufficient.	The vocabulary does not aid in understanding	3	2	1
Content (Proposed Solutions)	The solutions are creative and supported by arguments.	The solutions are good but not fully substantiated.	The solutions are limited.	No solutions are provided or they are inappropriate.	4	3	2
Structure	The podcast has a clear beginning, middle, and end.	The structure is good.	The structure is inconsistent.	There is no clear structure.	4	2	2
Time (Duration)	The podcast adheres to the expected time.	It is slightly longer or shorter than expected.	It is noticeably shorter or longer.	It significantly violates the time limit.	4	4	2
Presentation – Voice/Tempo	The tempo matches the flow of the story.	The tempo is appropriate.	The tempo is inconsistent.	The tempo is mismatched and the voice is incomprehensible.	4	3	2

Music	The music enhances the mood and understanding.	The music serves as supportive background.	The music is distracting.	The music negatively affects the presentation.	4	2	2
Technical Production (Recording)	Recording in a quiet environment	Recording in a relatively quiet environment.	Recording with considerable noise.	Recording in a noisy environment	4	4	2
Technical Production (Transitions)	The transitions are smooth.	The transitions are adequate.	The transitions cause disorientation.	There are no smooth transitions.	4	3	1
Podcast Notes	Attractive title and clear summary.	Good title, but with omissions.	Unclear title.	No notes provided.	4	3	3
Overall performance					43/44	31/44	22/44

The podcast 1 achieved the highest overall score, earning 43/44 points. Its lowest score (3/4) was found in the content - vocabulary criterion, suggesting slight room for improvement in using a more varied and precise vocabulary. The podcast largely met the evaluation criteria, presenting a clear structure with a well-defined beginning, middle, and end, making it easily understandable. The speaking pace was natural and smooth, facilitating comprehension, while the technical production stood out for its high-quality recording and seamless transitions that enhanced the auditory experience. Although podcast 1 performed exceptionally well, further refinement of its vocabulary could help convey content with even greater clarity and depth.

Podcast 2 received 31/44 points, indicating that it was characterised both by strengths and weaknesses. Its highest ratings were in the duration and recording criteria, where it scored 4/4, demonstrating that both its duration and its recording quality were appropriate and satisfactory. However, weaknesses were noted in criteria such as content - clarity, content - vocabulary, structure, and music, where it received 2/4. This suggests that some information lacked full clarity or contained minor inaccuracies, and the vocabulary, while adequate, was not particularly rich. Additionally, the background music was not always well-integrated and, in some instances, distracting from the content. The structure of podcast 2 was generally sound, but it contained some inconsistencies that affected its flow. Moreover, technical production had issues with transitions, which were not always smooth. To improve, podcast 2 could enhance content clarity, enrich its vocabulary, and improve transitions to ensure a more cohesive and enjoyable listening experience. Additionally, a more careful selection of background music could also help support the content without distracting the listener.

Podcast 3 was assessed with the lowest overall score, earning 22/44 points, indicating significant room for improvement. Its lowest ratings were in the criteria of content -vocabulary, and technical production -transitions, where it scored 1/4, reflecting shortcomings in information accuracy, content coherence, and technical aspects of production. The introduction and the overall structure were weak, making it less concise and organised compared to the other two podcasts. Additionally, the vocabulary was limited, affecting the clarity of the content. Furthermore, transitions were not smooth,

leading to disorientation for the listener, and the recording quality was not satisfactory, with noticeable noise and technical issues that diminished the auditory experience. However, podcast 3 performed adequately in terms of presentation and speech rhythm, which facilitated comprehension. For improvement, Podcast 3 should develop a more organised structure, enhance vocabulary use, ensure smoother transitions, and improve recording quality to provide a more enjoyable and professional listening experience.

Overall, the use of the rubric and the analytic criteria revealed multiple variations to different extents in regard to the quality of the student-generated podcasts. The results offer a definite understanding of the areas requiring improvement as well as those where students demonstrated enhanced skills. Although there are disparities in the quality of the student-generated podcasts, the results suggest that podcasts are an effective means of showcasing both the knowledge and skills acquired during the project, as well as highlighting areas that need further development.

#### 4.2 Peer assessment

Students were asked to complete a rubric for peer assessment based on five criteria, as shown in Table 2, using a four-point Likert scale ranging from “very good” to “not at all”. The mean scores for each group’s peer assessment, as well as the overall mean for the three groups that completed the podcasts, are presented in Table 2.

**Table 2:** Peer assessment, Groups 1, 2, 3

Assessment criteria	Group 1	Group 2	Group 3	Mean
My team members actively contributed to all phases	69%	94%	71%	78.0%
My team members listened carefully to opinions	95%	80%	43%	72.67%
My team members expressed willingness to solve problems	92%	96%	86%	91.33%
My team members behaved with respect	75%	92%	45%	70.67%
My team members were creative and had original ideas	57%	70%	42%	56.33%
My team members were consistent in their obligations	86%	91%	30%	69.0%

The analysis of the peer assessment results of the student groups involved in the creation of the podcasts reveals significant variations in their collaborative dynamics.

Group 2 achieved the highest performance across most criteria. These results indicate that the group 2 members maintained a high level of communication, responsibility, and coordination, which played a crucial role in the success of their collaboration.

Group 1 demonstrated satisfactory levels of cooperation, scoring 95% in attentive listening and 92% in problem-solving willingness. However, based on their peer-assessment, their performance was weaker in areas such as creativity and originality of ideas (57%), suggesting that despite their positive collaborative attitude, improvements in these areas were needed.

In contrast, group 3 faced the greatest challenges, scoring 42% in creativity and originality of ideas and 45% in respectful behaviour. These low scores in key criteria indicate difficulties with coordination and commitment among group members.

However, the group's 86% score in problem-solving willingness suggests that they made efforts to address the obstacles they encountered.

Overall, the results underscore that consistency, open communication, and commitment to a common goal are key factors for successful collaboration. The students recognised that teamwork requires responsibility, adaptability, and a willingness to exchange ideas, while the data highlights the need for further strengthening the collaborative culture within educational environments.

Group 4's inability to complete the podcast was directly linked to a lack of cohesion, communication, and team spirit. Students reported difficulties in organising themselves and distributing responsibilities fairly, and there was little active willingness to resolve issues during the project, as they reported to the authors and the geography teacher.

Regarding group 4, most members did not actively participate in the podcast creation process. Only one student reported being fully involved in all phases of the project, while 75% indicated minimal engagement. They also reported significant communication and collaboration difficulties, with 50% of them feeling that group discussions did not consider everyone's opinion, and 50% reporting a lack of willingness to solve problems. This suggests that when challenges arose, the team struggled to manage conflicts and find solutions, ultimately leading to the abandonment of the project. Additionally, creativity and the contribution of new ideas were limited, with 50% of students stating that the team failed to develop meaningful content and 50% reporting that no original ideas emerged during the collaboration. Half of the students also acknowledged significant delays and inconsistency in task execution.

The case of group 4 highlights the importance of managing collaboration in project-based learning activities. To prevent similar failures in the future, introducing more structured support mechanisms, such as regular feedback sessions and interim assessments, could help strengthen the collaborative culture among students.

### 4.3 Students' self-reflections

Upon completing the project, the students engaged in reflective processes, answering written questions anonymously. The questions were designed to assess their experience, identify the challenges they encountered, and develop a critical approach to the learning process. This process encouraged them to reflect on the difficulties and facilities they encountered and consider alternative ways of approaching their tasks. The students' responses highlighted both the demanding aspects of the project and the elements that significantly contributed to their learning experience, as presented below.

- **Difficulties and challenges**

A recurring difficulty in students' reflections was associated with the preparation of the recording content. As student 1 noted, *"Writing the script was difficult because it had to be clear, well-structured, and have a natural flow to be understandable and engaging for the listener."* Similarly, student 4 said, *"When it came time to record, we realized it was harder than expected to speak without stumbling or pausing."* Teamwork and coordination within the groups

were also challenging. Student 3 remarked, *“Teamwork and coordinating the members was one of the most demanding processes. Everyone had to actively participate...”* Student 7 further observed, *“There were times when we couldn’t agree on who would speak and how to structure the discussion flow.”* Student 5 also added, *“...but sometimes it wasn’t easy to distribute roles fairly or agree on everything.”* This feedback highlights the need for clearly defined roles within teams, as well as the development of communication and negotiation skills. A possible strategy would be to assign responsibilities early based on students’ preferences and abilities to prevent conflicts and work delays. These reflections also suggest that developing oral communication and rhetorical skills requires practice. Educational projects involving oral presentations might benefit from incorporating trial recordings and familiarising students with public speaking techniques to enhance the quality of their final work.

Moreover, time management and planning were identified as key obstacles faced by students. Coordinating the different stages of podcast production, such as research, recording, and editing, within a constrained timeframe proved to be a challenge. As student 9 stated, *“It was hard to find a time that suited everyone to work on the podcast, especially since we had other school commitments.”* This observation highlights the importance of scheduling and project management skills in education. To address this challenge in future projects, the introduction of structured work timelines and students’ guidance on deadline management could significantly improve their experience and outcomes.

Finally, students reported difficulties when using audio recording and editing software. For example, student 4 explained, *“At first, we struggled to understand how to properly mix audio and remove background noise from the recording.”* This challenge underscores the importance of technological support in projects that involve digital tools. Future initiatives could benefit from preliminary software tutorials, educational videos, and additional practice opportunities to reduce technical challenges and facilitate the learning process.

- **Factors contributing to the understanding of the topic**

Students identified two factors that significantly enhanced their better understanding of the topic discussed in the podcast: the first author’s presentation and the interviews with residents. As student 2 reported, *“The school presentation about the traffic congestion provided us with useful information and helped us better understand the causes and consequences of the issue.”* Similarly, student 5 observed, *“Interviews with the residents of the town helped us see the issue from different perspectives. Hearing from people who experience the problem daily made the discussion more realistic and showed us the importance of primary research and experiential learning.”*

- **Reflection and potential improvements**

Students were provided with the opportunity to reflect on their strengths and weaknesses and offer suggestions for future projects. From their feedback, areas that

needed improvement emerged, including time management, opportunities for practice, and the role distribution.

As student 12 mentioned, *“If we had more preparation time, we could have organised the process better and avoided last-minute stress.”* Similarly, student 4 shared, *“The recordings were rushed due to time constraints. It would have been more useful to have the chance to redo them to improve sound quality and presentation flow.”* Additionally, student 12 also emphasised the importance of practice, *“We should have practised more before recording so we would feel more comfortable and avoid mistakes during narration.”* Student 1 observed, *“Collaboration was good, but if we had clearly defined roles from the start, the work would have been more evenly distributed, preventing delays.”* Finally, student 11 added, *“We could have prepared more targeted questions for the interviews to collect more substantial and useful information.”*

Students’ reflections underscore the significance of thorough planning, effective time management, technical preparation, and clear role distribution in ensuring a more complete and high-quality final product. By addressing these challenges proactively, future projects could offer students an enriching learning experience.

## 5. Discussion and Conclusions

This study explored the potential of student-generated podcasts as an assessment tool within a geography-based project in secondary education. Through a four-phase project on mobility in the town, students collaboratively designed questionnaires, conducted interviews, collected and analysed data, wrote podcasts’ plots, produced audio content, and presented their tasks.

The results indicate that student-generated podcasts can enhance learning by improving vocabulary and content understanding and enhancing critical thinking, creativity and digital literacy. Rubric-based evaluation of the podcasts revealed significant variations in group performance, demonstrating that structured criteria can provide meaningful feedback for both students and teachers (Chiou et al., 2025). While the highest-rated podcasts demonstrated clear structure, content understanding, and enhanced technical skills, some areas for improvement were identified, such as vocabulary use, clarity of information, and transition quality. These findings highlight the need for ongoing refinement of podcast-based assessment methods to ensure they effectively measure both content knowledge and skill development.

Peer-assessment findings showed that students across all groups exhibited a strong willingness to solve problems while collaborating with their peers on the project.

As previous research suggests, problem-solving skills are important for academic achievements, as they can improve cognitive flexibility and behavioural repertoire (Ugueto et al., 2014). Despite the challenges faced, the three student groups successfully overcame obstacles and created their podcasts, applying a range of skills, such as inquiry, analysis, problem-solving, writing, cooperation and communication, critical thinking, and creativity.

Both the peer assessment and self-reflection data underscored the positive role of effective communication (Yoestara & Putri, 2019), cooperation (Demo et al., 2025; Tulley, 2011), problem-solving, and responsibility in engaging students successfully in the podcast productions (Hall & Jones, 2021). At the same time, students reported challenges related to time management, team coordination, consistency in fulfilling obligations, and effective use of technology. Inadequate skills in these areas likely led to variations in the quality of the podcasts and the level of cooperation within groups. These findings align with previous research showing that poor participation skills and a lack of technology literacy skills can hinder teamwork and the production of podcasts (Hall & Jones, 2021; Phillips, 2017). In contrast, enhanced problem-solving skills proved to be a significant factor in decision-making, thereby promoting academic achievement (Yurtseven et al., 2021). The students' problem-solving ability helped the three groups finalise their projects. These skills also contributed to their engagement in the project's activities, motivating them to complete the project and remain consistent with their obligations.

These results suggest that future implementation of student-generated podcasts would benefit from additional support mechanisms, such as continuous guidance from teachers, multiple practice opportunities and predefined role assignments, could enhance the effectiveness of future student-generated podcasts. Teachers should have a clear understanding of students' skill levels before assigning such a challenging activity, one that requires a wide range of skills for successful results. Alternatively, providing preliminary practice sessions or problem-based learning (Yildirim et al., 2011) could better prepare students for the task ahead.

Overall, this study offers valuable insights into both the pedagogical benefits and practical challenges related to student-generated podcasts. The findings suggest that student-generated podcasting is a promising tool that can assess geographical learning alongside a wide range of skills, including inquiry, communication, collaboration and digital literacy skills. Future research could examine its potential across different subject areas and educational levels, as well as the role of scaffolding in improving students' outcomes.

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### Conflict of Interest Statement

The authors declare no conflicts of interest.

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### References

- Ahn, J., Inboriboon, P.C., & Bond, M.C. (2016). Podcasts: Accessing, choosing, creating, and disseminating content. *Journal of Graduate Medical Education*, 8(3), 435–436. <https://doi.org/10.4300/jgme-d-16-00205.1>
- Brown, L. (2015). Podcasting and vodcasting to BSc Geography students. *Planet*, 24(1), 62–67. <https://doi.org/10.11120/plan.2011.00240062>
- Chen, C. W. (2023). Lend Me Your Ears: A study on taking the role of podcasters by Taiwanese EFL learners. *Computers in the Schools*, 41(4), 497–515. <https://doi.org/10.1080/07380569.2023.2291639>
- Chiou, V., Eising, J., February, P., & Özüdoğru, M. (2025). Formative Assessment put into practice. In All Means All (Eds), *An Open Textbook for an inclusive and intersectional, multi-dimensional approach in teacher education. A community project from all-means-all education*, (pp. 1301-1328). Pressbooks. <https://book.all-means-all.education/ama-2025-en/chapter/formative-assessment-put-into-practice/>
- Coutinho, C., & Mota, P. (2011). Web 2.0 technologies in music education in Portugal: Using podcasts for learning. *Computers in the Schools*, 28(1), 56–74. <https://doi.org/10.1080/07380569.2011.552043>
- Dale, C. (2007). Strategies for using podcasting to support student learning. *Journal of Hospitality, Leisure Sport & Tourism Education*, 6(1), 49–57. <https://doi.org/10.3794/JOHLSTE.61.155>

- Demo, H., Chiou, V., Cuccu, M. & Özdemir, Ö. (2025). Cooperative Learning. In All Means All (Eds), *An Open Textbook for an inclusive and intersectional, multi-dimensional approach in teacher education. A community project from all-means-all education*, (pp. 1111-1131). Pressbooks. <https://book.all-means-all.education/ama-2025-en/chapter/cooperative-learning/>
- Drew, C. (2017). Educational podcasts: A genre analysis. *E-Learning and Digital Media*, 14(4), 201–211. <https://doi.org/10.1177/2042753017736177>
- Dversnes, G., & Blikstad-Balas, M. (2023). The potential of podcasts for exploratory talk in high school. *Computers in the Schools*, 40(3), 282–302. <https://doi.org/10.1080/07380569.2023.2196963>
- Ekmekçi, E. (2017). Improving English as a Foreign Language (EFL) Learners' ICT Literacy Skills through Digital Storytelling. *Participatory Educational Research*, 4(2), 1-9. [https://www.perjournal.com/archieve/spi\\_16\\_4/per\\_16\\_spi\\_4\\_1.pdf](https://www.perjournal.com/archieve/spi_16_4/per_16_spi_4_1.pdf)
- Errabo, D. D., Rosa, A. D., & Gonzales, L. J. M. (2024). Optimizing differentiated podcasts to promote students' self-regulation and engagement, self-efficacy and performance in asynchronous learning. *Journal of Research in Innovative Teaching & Learning*, 17(2), 368–390. <https://doi.org/10.1108/JRIT-02-2024-0039>
- Evans, C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. *Computers & Education*, 50(2), 491–498. <https://doi.org/10.1016/j.compedu.2007.09.016>
- Jarvis, C., & Dickie, J. (2010). Podcasts in support of experiential field learning. *Journal of Geography in Higher Education*, 34(2), 173–186. <https://doi.org/10.1080/03098260903093653>
- Hall, N. M., & Jones, J. M. (2021). Student-Produced podcasts as a teaching and learning tool. *American Journal of Distance Education*, 37(1), 53–65. <https://doi.org/10.1080/08923647.2021.1995256>
- Hasan, M. M., & Tan, B. H. (2012). ESL Learners' Perception and Attitudes towards the Use of Podcast in Developing Listening Skills. *The English Teacher*, XLI(2), 160-173. [https://www.journals.melta.org.my/TET/downloads/tet41\\_02\\_05.pdf](https://www.journals.melta.org.my/TET/downloads/tet41_02_05.pdf)
- Hill, J. L., & Nelson, A. (2011). New technology, new pedagogy? Employing video podcasts in learning and teaching about exotic ecosystems. *Environmental Education Research*, 17(3), 393–408. <https://doi.org/10.1080/13504622.2010.545873>
- Hill, J., & Nelson, M. (2015). Evaluating the perceived effectiveness of video podcasts as a learning resource for geography. *Planet*, 24(1), 76–82. <https://doi.org/10.11120/plan.2011.00240076>
- Indahsari, D. (2020). Using podcast for EFL students in language learning. *JEES (Journal of English Educators Society)*, 5(2), 103–108. <https://doi.org/10.21070/jees.v5i2.767>
- Kay, R. H. (2012). Exploring the use of video podcasts in education: A comprehensive review of the literature. *Computers in Human Behavior*, 28(3), 820–831. <https://doi.org/10.1016/j.chb.2012.01.011>
- Kenna, T. (2022). Podcasting urban geographies: examining the utility of student-generated research podcasts for deep learning and education for sustainable

- development. *Journal of Geography in Higher Education*, 47(4), 533–552. <https://doi.org/10.1080/03098265.2022.2122030>
- Kemp, J., Mellor, A., Kotter, R., & Oosthoek, J. W. (2011). Student-Produced Podcasts as an Assessment Tool: An Example from Geomorphology. *Journal of Geography in Higher Education*, 36(1), 117–130. <https://doi.org/10.1080/03098265.2011.576754>
- Kemp, J., Kotter, R., Mellor, A., Oosthoek, J., & White, C. (2015). Diversifying assessment across the 'Two Cultures': student-produced podcasts in Geography. *Planet*, 27(1), 2–7. <https://doi.org/10.11120/plan.2013.27010002>
- Lee, M. J. W., McLoughlin, C., & Chan, A. (2007). Talk the talk: Learner-generated podcasts as catalysts for knowledge creation. *British Journal of Educational Technology*, 39(3), 501–521. <https://doi.org/10.1111/j.1467-8535.2007.00746.x>
- 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. <https://doi.org/10.5539/jel.v13n3p177>
- Naseri, S., & Motallebzadeh, K. (2016). Podcasts: A Factor to Improve Iranian EFL Learner' Self-Regulation Ability and Use of Technology. *Educational Technology & Society*, 19(2), 328–339. [https://www.j-ets.net/collection/published-issues/19\\_2](https://www.j-ets.net/collection/published-issues/19_2)
- Phillips, B. (2017). Student-Produced Podcasts in Language Learning – Exploring student perceptions of podcast activities. *IAFOR Journal of Education*, 5(3). <https://doi.org/10.22492/ije.5.3.08>
- Prince, B. F. (2020). Podcasts: the potential and Possibilities. *Teaching Sociology*, 48(4), 269–271. <https://doi.org/10.1177/0092055x20959837>
- Robinson, S., & Ritzko, J. (2009). Podcasts in education: What, why and how? *Proceedings of the Academy of Educational Leadership, New Orleans*, 14(1), 38-43. <https://www.abacademies.org/Public/Proceedings/Proceedings24/AEL%20Proceedings.pdf>
- Sayadi, M., & Heidar, D. M. (2018). The impact of using podcasts on Iranian Autonomous /Non-Autonomous EFL learners' listening comprehension ability at Pre-Intermediate level. *International Journal of Research in English Education*, 3(3), 72–82. <https://doi.org/10.29252/ijree.3.3.72>
- Sullivan, J. L. (2019). The platforms of podcasting: past and present. *Social Media + Society*, 5(4). <https://doi.org/10.1177/2056305119880002>
- Swan, K. O., & Hofer, M. (2009). Trend Alert: A history teacher's guide to using podcasts in the classroom. *Social Education*, 73(2), 95–102. [https://www.socialstudies.org/system/files/publications/articles/se\\_730295.pdf](https://www.socialstudies.org/system/files/publications/articles/se_730295.pdf)
- Tulley, C. (2011). IText reconfigured: The rise of the podcast. *Journal of Business and Technical Communication*, 25(3), 256–275. <https://doi.org/10.1177/1050651911400702>
- Ugueto, A., Santucci, L., Krumholz, L., & Weisz, J. (2014). Problem-Solving Skills Training. In E.S. Sbulati, H.J. Lyneham, C.A. Schniering, & R.M. Rapee (Eds), *Evidence-Based CBT for Anxiety and Depression in Children and Adolescents. A Competencies-Based Approach* (pp. 247-259). West Sussex, UK: John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781118500576.ch17>

- VanUitert, V. J., Kennedy, M. J., Peebles, K. N., Romig, J. E., Mathews, H. M., & Rodgers, W. J. (2022). Enhancing science performance of middle-school students with and without developmental and behavioral-based disabilities using the Content Acquisition Podcast Professional Development approach. *Journal of Research in Science Teaching*, 60(3), 515–543. <https://doi.org/10.1002/tea.21808>
- Wilkinson, A. (2013). Using blogs and podcasts in the history classroom. In A. Wilkinson, (Ed.), *Using New Technologies to Enhance Teaching and Learning in History* (pp. 83–92). London: Routledge. <https://doi.org/10.4324/9780203075593-12>
- Yang, P. (2025). The Role of Podcast Creation in Supporting Motivation and Self-Directed Learning among EFL College Students: An Action Research study. *Teaching English as a Second or Foreign Language-TEFL-EJ*, 28(4). <https://doi.org/10.55593/ej.28112a9>
- Yıldırım, A., Hacıhasanoğlu, R., Karakurt, P., & Türkleş, S. (2011). Problem solving skills and influential factors in high school students. *Journal of Human Sciences*, 8(1), 905–921. <http://www.insanbilimleri.com>
- Yoestara, M., & Putri, Z. (2019). PODCAST: An alternative way to improve EFL students' listening and speaking performance. *Englisia Journal of Language Education and Humanities*, 6(1), 15. <https://doi.org/10.22373/ej.v6i1.3805>
- Yurtseven, R., Akkaş Baysal, E., & Ocak, G. (2021). Analysis of the relationship between decision making skills and problem-solving skills of primary school students. *International Online Journal of Education and Teaching (IOJET)*, 8(3), 2117-2130. <https://files.eric.ed.gov/fulltext/EJ1308060.pdf>